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ABSTRACT

An escalation in the use of non-book materials in the library at the University of Bath created the need for an evaluation of their uses, learning efficiency, and cost effectiveness. Data were collected during 1976-1977 using observations, short and long questionnaires, free responses, group interviews with students, and cost analysis. All information collected from the questionnaires, interviews, and free responses was transferred to cards indicating the name of the originator of materials, the number sequence of the student, type of response, and the material. Cost analysis was conducted by calculating the cost of providing the materials for which a cost for each use could be determined. Findings are reported on (1) the use of study packs, videocartridges, slide/tape, and microfiche by both lecturers and students in various academic departments; (2) Student reactions to study packs and video cartridges, based on feedback from students either in writing or during interviews concerning how the materials were used, the loan period, the basis of provision, where they were used, and access to them in the library; (3) feedback to lecturers and the library; and (4) cost analysis. Conclusions and recommendations are divided into the areas of proposed research, research strategies, the system that was investigated, and suggestions for further work. The study is supported by numerous tables and graphs and a copy of the questionnaire evaluation form is included. (JPF)

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OCCASIONAL PUBLICATION NO. 3

AN EVALUATION OF THE USE OF SELF INSTRUCTIONAL MATERIALS IN THE LIBRARY

1. The Library Organisation and the Methods of Investigation

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Educational Services Unit

University of Bath

IR006105

AN EVALUATION OF THE USE OF SELF-INSTRUCTIONAL MATERIALS IN THE LIBRARY

1. The Library Organisation and the Methods of Investigation

1. 1. Introduction

At the University of Bath there has been an escalation in the use of non-book materials in the Library in recent years. These materials include study packs, microfiche, video cartridges, synchronised tape slide sequences, audio cassettes with associated printed materials. Two sets of materials showing rapid increases have been study packs and video cartridges.

Year	1974-5	1975-6	1976-7
Study packs	210	720	1457
Videocartridges	13	147	204

Table 1. 1 Number of study packs and videocartridges in the Library.

1. 2. Study Packs

The study packs have a variety of formats. They can vary from a set of off-prints from journals (Figure 1. 1) through government leaflets to newspaper cuttings or small circulation journals from pressure groups (Figure 1. 2). The contents are collected by the lecturer and placed in a manilla folder. Where large numbers of students are going to use the materials, there may be two or three study packs of the same materials. Students are required to read the contents of the study pack for a written assignment or a seminar. (Educational Services Unit, 1975) (1). Some study packs are associated with worksheets.

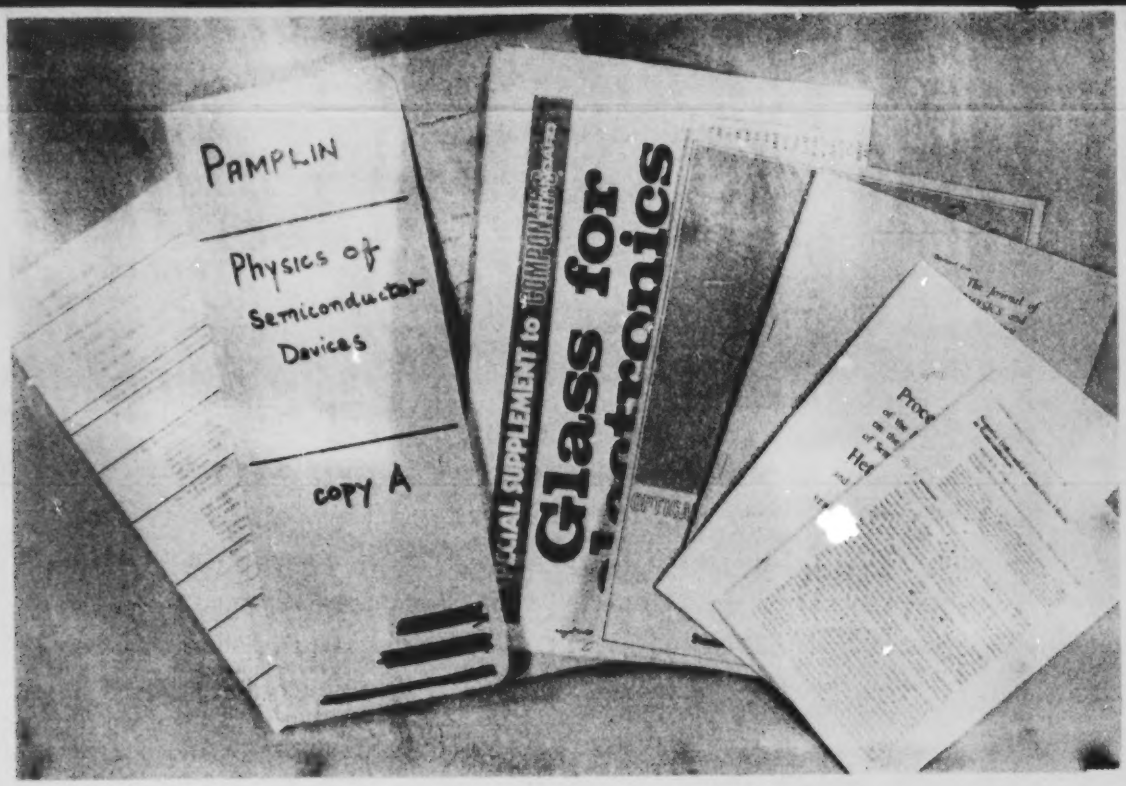


Figure 1.1 : An example of a Study Pack

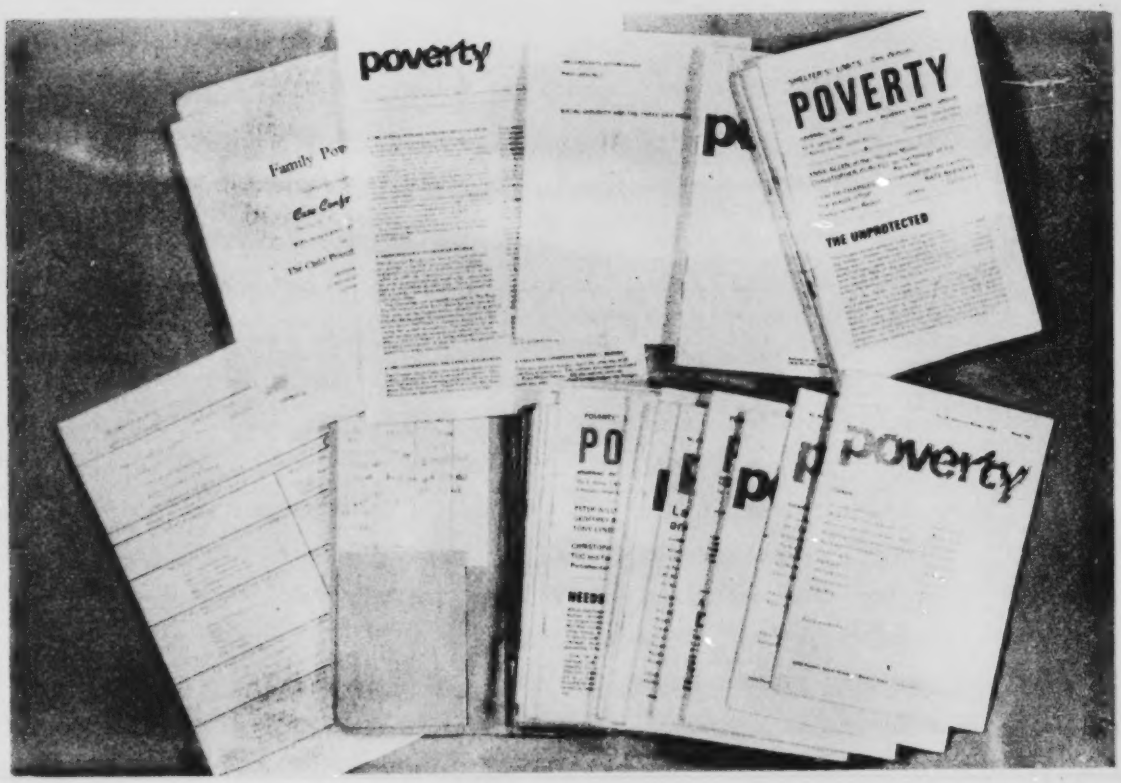


Figure 1.2 : An example of a Study Pack

Figure 1.3 : The Study Pack Shelving in the Library

The study packs are part of a short term loan collection available by applying at the issue desk. The short term loan collection allows students to borrow material for 4 hours during the morning, 4 hours during the afternoon or overnight. The study packs are shelved under the lecturer's name (figure 1. 3), so the student asks for the study pack by the lecturer's name and the title.

1. 3. Video cartridges

There are many Universities and Polytechnics in the UK with a larger range of video cartridges and video cassettes (Noordhof 1974) (2) than at Bath. The development of the present system has been cautious (Walton, 1974) (3) and has allowed good cooperation between the production services and the library (Harris, 1975) (4). The EIAJ video cartridge format was chosen at Bath because a) it was compatible with some existing equipment, b) the automatic rewind of the tape on the cartridge. The second reason provides less frustration for a library user because he knows that he will always find the programme at the beginning of its run.

The video cartridges are on open access to students (figure 1. 4). There are two studies in the library set aside specifically for the purpose of viewing. Students take a cartridge off the shelf and place it in the machine, which is easy to operate. Some video cartridges have associated printed materials.

1. 4. Other non-book materials

There are about 30 tape slide sequences available. Again a study is set aside specially for these with open access (figure 1. 5). Some programmes have associated printed material. In a few cases this printed material is integrated in association with the pulsing system on the machine which can stop the playback; students are required to

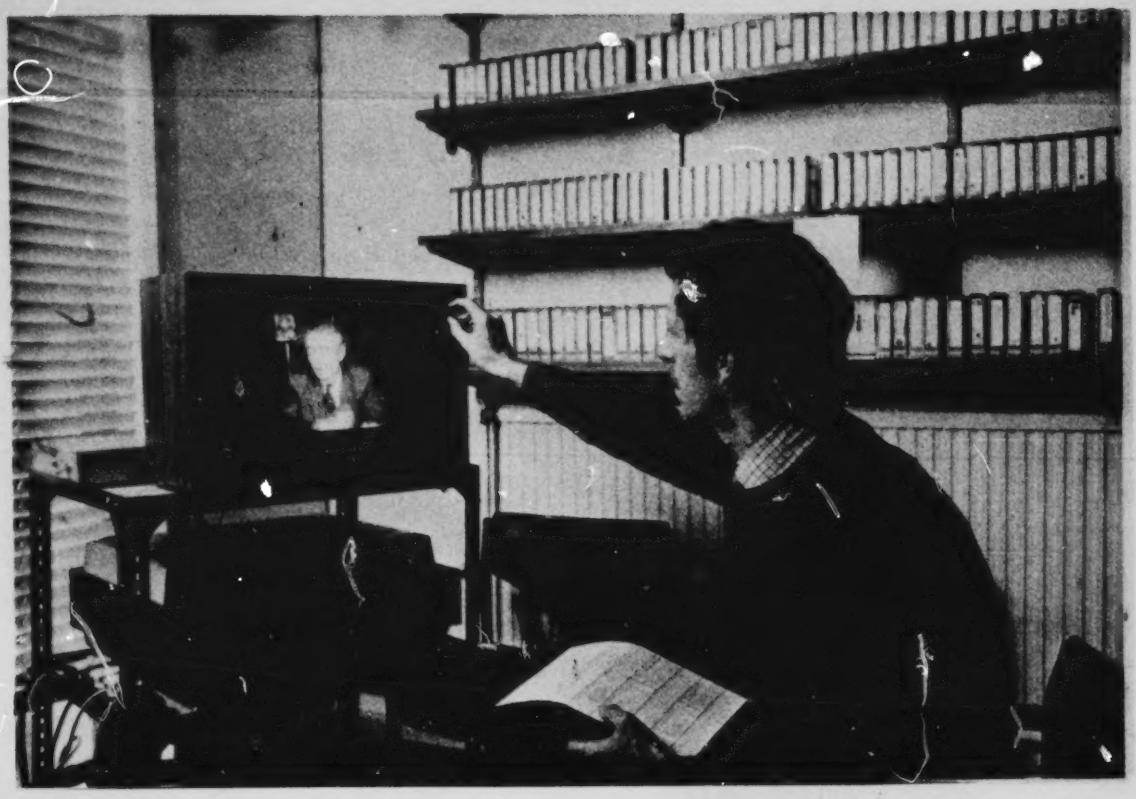


Figure 1.4 : The Videocartridge Room in the Library

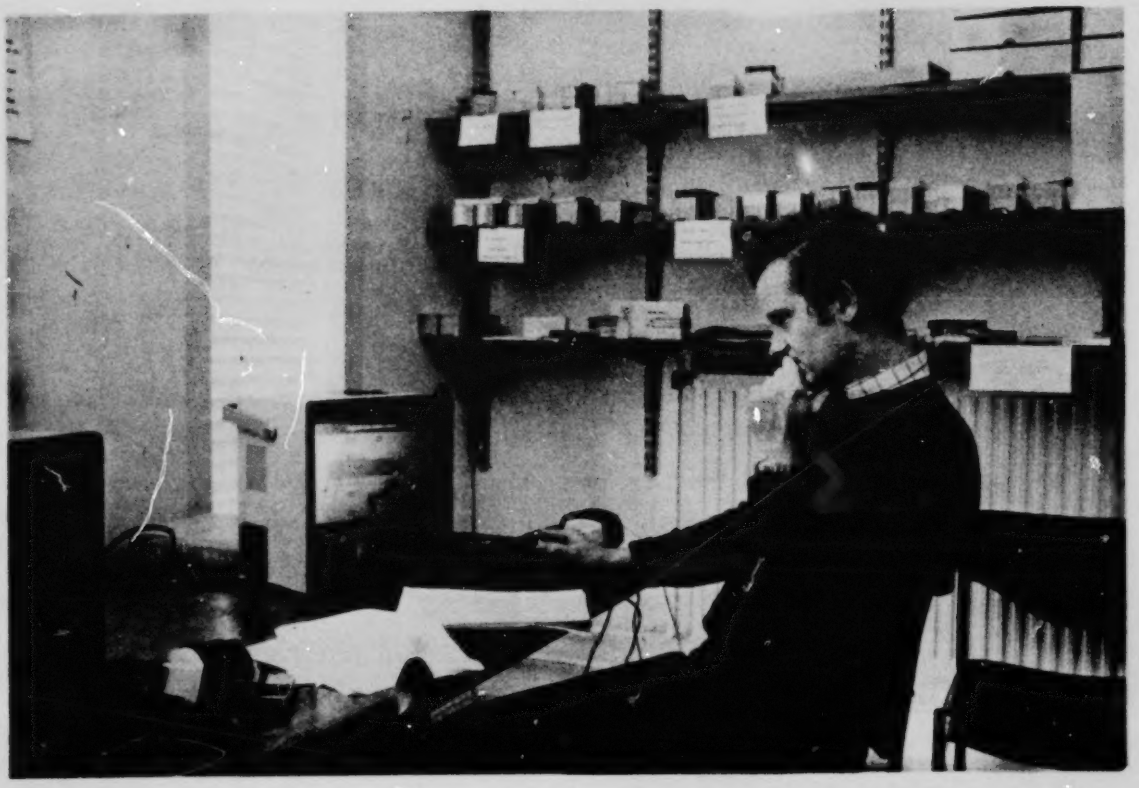


Figure 1.5 : The Tape Slide Room in the Library

work with the associated printed materials before re-activating the machine.

The University Library catalogue is on microfiche (5). In addition there are a further 1000 microfiche materials. These materials vary from the equivalent of study packs, through programmed learning texts, manufacturers' data on machinery and equipment, to records of inaccessible materials (including overhead projector transparencies used by lecturers!)

1. 5 The need for an evaluation

Evaluation is a measure of the "worth" of something (Popham 1975) (6). In spite of the large increase in the use of non-book materials in the library, little information was available in terms of uses, learning efficiency and cost effectiveness. It was clear that there was a need for information.

Little work appears to have been carried out on the evaluation of non-book materials for independent learning in libraries. Much of the evaluation work on non-book materials for independent learning has been based at the Open University (for example: Bates 1973, (7) McIntosh 1974 (8). An extensive list of publications is in Kirkwood 1976 (9)). Some of this work is based on the development of the illuminative evaluation techniques proposed by Parlett and Hamilton 1972 (10). This development has encouraged investigation into rationale, evolution, operations, achievements and difficulties. The approach has much in common with the model proposed by Eraut (1972) (11) and emphasises that evaluation is idiosyncratic to a particular course or innovation. The generalisations may be realised for techniques and methodology, but the conclusions may not be generalisable.

1. 6. The Aims of the Investigation

The original intention was to answer some of the following questions:

Who uses the material and when?

How are the materials used and where?

How do the materials relate to the student's course and assessment?

What is the main purpose of the materials?

What is the cost of assembling and administering the materials?

How much cognitive learning takes place when using or having used the materials?

The limited funding available precluded attempting all the questions. A part-time research assistant was available for one year through a small grant from the Nuffield Foundation. The scope was reduced by making the last question the basis of a separate investigation.

1. 7. The Methods Used

Detailed information is given in the appropriate section (Harris and Kirkhope 1977 (12)). The methods used were:

a) Observation
b) Questionnaires
   i) Full Questionnaire
   ii) Short Questionnaire
c) Free response
d) Interviews with students
   i) individually
   ii) in groups
e) Cost analysis.

Observation included checking study packs for content, number of uses; timing of assembly, issue, return and reservations; observation of students using video cartridges. The number of uses of study packs can be determined from the date stamps in the pack; the date stamp includes the issue period. The timing was carried out primarily as part of the costing analysis.

The questionnaire (a copy is attached in the appendix) was a modified form of one already in use. From this general reactions to materials could be determined and students were also given an opportunity to write any comments. Copies of the questionnaire were placed in all study packs and sets were available in the studies for tv and tape-slide playback.

A short questionnaire sheet (a copy is attached in the appendix) was also used with students borrowing study packs. The student was asked to write on the sheet before or after using the study pack. The sheet was handed to the student by one of the investigating team.

Interviews were of two types:

(i) with students in the Library immediately before or after using a study pack, video cartridge or other material.

(ii) with groups of students who have used specific materials associated with their course.

The cost analysis attempted to find the costs in labour, equipment, furnishings and materials in assembling, issuing and maintaining study packs and video cartridges.

1. 8. The Pilot Study

The pilot study incorporated a, b (i) and d (i) from the previous section. A report of the pilot study (Harris and Kirkhope 1977) (13) was presented at the Annual Conference

of the Association for Programmed Learning and Educational Technology at the University of Surrey in April 1977. From the ensuing discussion with several participants, and in particular Dr. Fjällbrant of Chalmers University of Technology, Göteborg, Sweden, modifications were made in data collection.

At the time of the pilot study the questionnaire response from study packs was poor, so the short questionnaire form was introduced. The investigators covered 5 complete days in the library near the issue desk and all students borrowing or returning study packs on these days were stopped and asked to complete the form. This method improved the sampling of the students.

The individual interviews with students (d (i) above) used during the pilot study were found to be very time-consuming and so interviews were carried out with groups of students known to have used specific materials. Groups unable to come to an interview were asked to write free responses (1 or 2 sides of A4).

1. 9. Assembly of Data

All information collected from the questionnaires, interviews and free responses was transferred to cards with key words. Each interview, questionnaire, free response was identified by a sequence of letters and numbers indicating the name of the originator of the materials, the number sequence of the student, the type of response and the material e.g.

2R	21	Q	S
Dr. R..	21st student on this material	Full Questionnaire	Study Pack

The key words were derived from the responses in the pilot study and the appropriate responses relating to that keyword were listed on the cards.

1. 10. Reporting System

In order to keep academics and librarians informed, a short report was circulated at the beginning of the project, once during the project and at the end of the project. Details are given in the appropriate section (Harris and Kirkhope 1977a) (12).

References

(1) EDUCATIONAL SERVICES UNIT (1975) Bulletin 14, University of Bath.

(2) NOORDHOF, G.H. (1974) "The Development of Self Replay Facilities at Brunel University". Programmed Learning and Educational Technology, 11, 10-15.

(3) WALTON, E. (1974) "Outlook. No. 7. John Lamble and Duncan Harris of the University of Bath" Educational Broadcasting International, September 1974.

(4) HARRIS, N.D.C. (1976) "Cooperation between Educational Technologists and Librarians" in HARRIS, N.D.C. (Ed) Educational Technology in European Higher Education, London, C.E.T.

(5) BRYANT, P. (1975) Bath University Comparative Catalogue Study : First Report Bath, Bath University Library. (British Library Research and Development Report No. 5240).

(6) POPHAM, W.J. (1975) Educational Evaluation, Englewood Cliffs, N.J., Prentice Hall.

(7) BATES, A.W. (1973) "An Evaluation of the Effect of Basing an Assignment on Broadcast Material in a Multi Media Course" Programmed Learning and Educational Technology 10, 348-359.

(8) McINTOSH, N. (1974) "Evaluation of Multi Media Educational Systems - Some Problems" British Journal of Educational Technology, 5, 43-59

(9) KIRKWOOD, A. (1976) A Bibliography of Published and Unpublished Work by Members of the Institute Milton Keynes, The Open University Institute of Educational Technology (Monograph No. 2).

(10) PARLETT, M. HAMILTON, D. (1972) "Evaluation as Illumination : A New Approach to the Study of Innovatory Programs" Edinburgh : Centre for Research in the Educational Sciences (Occasional Paper No. 9)

(11) ERAUT, M. (1972) "Strategies for the Evaluation of Curriculum Materials" in AUSTWICK, K. and HARRIS, N.D.C. (Ed). Aspects of Educational Technology 6 London, Pitmans.

(12) HARRIS, N.D.C. & KIRKHOPE, S. (1977a) An Evaluation of Self Instructional Materials in the Library:

2. Distribution of Study Pack, Videocartridge, Tape/Slide and Microfiche Use
3. Student Reactions to Study Packs and Video cartridges
4. Feedback to Lecturers and Library
5. Cost Analysis
6. Conclusions and Recommendations

Bath, University of Bath Educational Services Unit.

(13) HARRIS, N.D.C. & KIRKHOPE, S. (1977b) "An Evaluation of the Use of Self Instructional Materials in the Library" in HILLS, P.J. & (Ed.) Aspects of Educational Technology XI, London, Kogan Page.

APPENDIX

Full Questionnaire

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

Evaluation Form

Please complete a form for each set of material you use (study pack, tape-slide programme, television programme)

1. School:

   Viewing: class/group/individual

   Month and year of viewing:

   Year/semester of group/individual:

Please circle the code corresponding to your answer, like this (2).

2. Title of material:

3. Where did you use the material?

Lecture Theatre (Room .....)	1
Library	2
Elsewhere (specify)	3

4a. Did you find this material interesting?

Very interesting	1
Fairly interesting	2
Not very interesting	3
Not interesting at all	4
Don't know	5

4b. Which parts, if any, of this material did you think were boring?

5a. How difficult did you find this material?

Very difficult	1
Difficult	2
Just right	3
Easy	4
Very easy	5
Don't know	6

5b. Which parts, if any, of this material did you find particularly difficult?

6. What do you think were the main points the material was trying to put across?

7a. How clearly do you think this material put its main points over?

Very clearly	1
Fairly clearly	2
Not very clearly	3
Not clearly at all	4
Don't know	5

7b. Which parts of the material, if any, did you think could have been made clearer?

Continued over.

8a. How useful did you find any printed handout for this programme?

Very useful	1
Fairly useful	2
Not very useful	3
Not useful at all	4
Not read	5
Not received	6

8b. either If you thought the printed handout was not useful, why was this?

_____

_____

_____

_____

or Specify what printed handout would have been useful

_____

_____

_____

_____

9. If this material were to be re-made, what changes do you think should be made?

_____

_____

_____

_____

_____

10. Are there any other comments you would like to make about this material?

_____

_____

_____

_____

_____

11. Should this material be available in the Library?

Yes	1
No	2

12. How is this material used in relation to your course?

_____

_____

_____

_____

13. Other comments:

_____

_____

_____

Signed .....(Your name will NOT be used in any information passed on to anyone else)

THANK YOU VERY MUCH FOR YOUR HELP

PLEASE RETURN THIS FORM TO THE LIBRARY ISSUE DESK
OR THE EDUCATIONAL SERVICES UNIT 3E

Short Questionnaire

UNIVERSITY OF BATH Date:

EDUCATIONAL SERVICES UNIT

An investigation is being carried out of students' uses of and attitudes to the study packs/microfiches in the Library, in order to facilitate the future running of the system. Would you please complete the short questionnaire below.

Name:

School:

Year:

Pack/Fiche title:

Lecturer:

Please comment on the use of this or other packs/fiches in your course(s).

THANK YOU FOR YOUR HELP (Your name will NOT be used in any information passed on to anyone else)

OCCASIONAL PUBLICATION NO. 3

AN EVALUATION OF THE USE OF SELF INSTRUCTIONAL MATERIALS IN THE LIBRARY

2. Distribution of Study Pack, Videocartridge, Tape/Slide and Microfiche Use

Educational Services Unit

University of Bath

2. Distribution of Study Pack, Videocartridge, Tape/Slide and Microfiche Use

2. 1. Introduction

This section is concerned with the use made of the study pack and videocartridge systems in the Library by both lecturers and students in the University of Bath. The Library situation has been described in the appropriate section. (Harris and Kirkhope 1977a) and the method used was primarily observation.

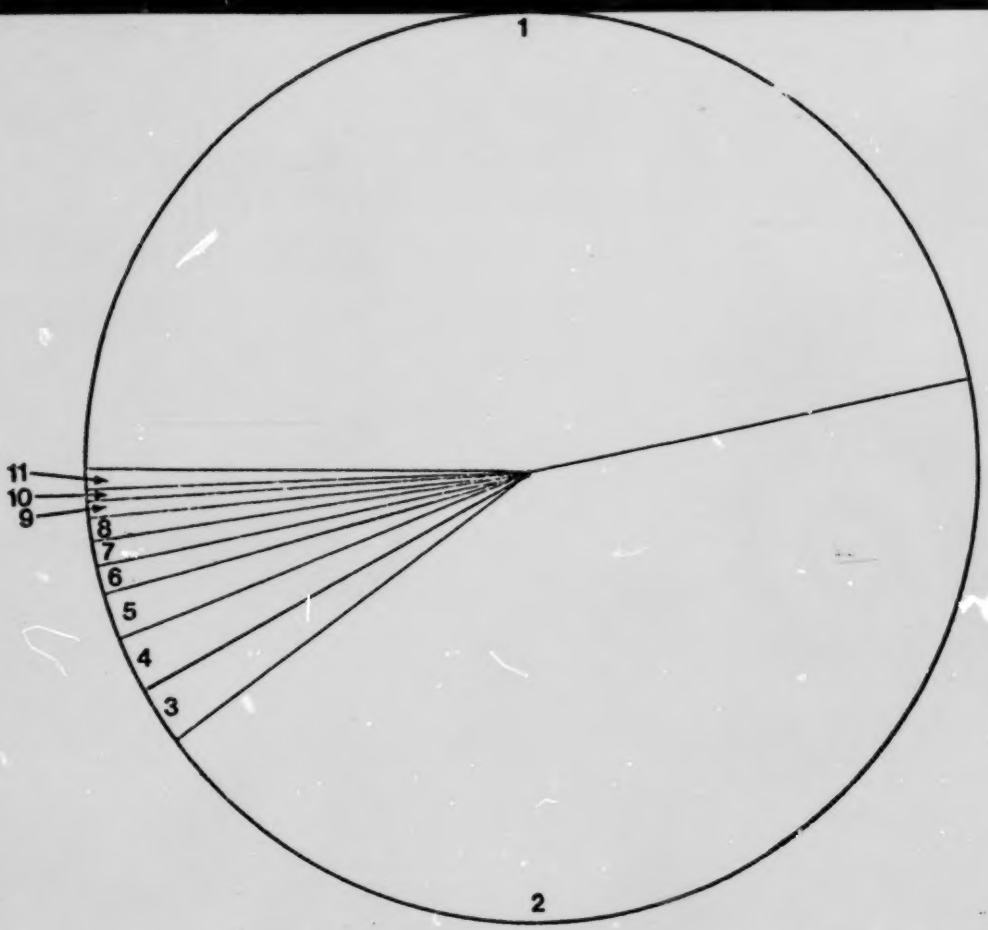
2. 2. Distribution of Study Packs between the Schools in the University

During the academic year 1976/77, the period of the investigation, 1457 different study packs were present in the Library. This figure includes packs removed during the year, new packs added during the year for future use, and packs present for the entire period. The distribution of the packs between the Schools of the University is shown in Figure 2. 1. It is interesting to note that 1310 of the packs were placed in the Library by lecturers from the Schools of Humanities and Social Sciences and Management, and that the School of Architecture and Building Engineering is the only one whose lecturers do not use the study pack system at all.

86 lecturers in the University have placed material of this type in the Library, including one who does not appear to be a member of this University!

2. 3. Distribution of Videocartridges

The distribution of videocartridges among the Schools of the University is shown in Table 2. 1. Here the biggest users of the system are the School of Architecture and Building



		Number of Packs
1	Humanities and Social Sciences	680
2	Management	630
3	Pharmacy and Pharmacology	30
4	Education	30
5	Biological Sciences	24
6	Modern Languages	15
7	Electrical Engineering	13
8	Materials Science	12
9	Mathematics	8
10	Centre for European Industrial Studies	6
11	Physics	3
	Chemistry	2
	Engineering	2
	Chemical Engineering	1

Figure 2. 1: Distribution of Study Packs between the Schools of the University

	Architecture and Building Engineering	Biological Sciences	Chemical Engineering	Chemistry	Education	Electrical Engineering	Engineering	Humanities and Social Sciences	Management	Materials Science	Mathematics	Modern Languages	Pharmacy and Pharmacology	Physics	Other	TOTAL
Open University	47	16	-	-	3	17	7	15	27	-	-	-	-	-	2	133
Other University	-	-	-	-	-	12	-	-	-	-	15	-	1	-	-	28
Internal	-	1	-	-	-	9	1	1	-	-	1	-	3	-	4	20
Off-air (BBC/IBA)	-	-	-	-	8	-	-	-	10	-	-	5	-	-	-	23
TOTAL	47	16	-	-	11	38	8	16	37	-	16	5	4	-	6	204

Table 2.1: Distribution of Videocartridges in the Library (by type and School)

Engineering; although the School of Management, with 37 videocartridges, is also a sizeable user. The total number of lecturers using this system is 35.

2. 4. Distribution of other non-book materials

(a) Synchronised Tape/Slide

The distribution of tape/slide sequences in the University is given in Table 2. 2.

	Number of Sequences	Number of Lecturers originating/sponsoring
Electrical Eng.	7	1
Engineering	6	4
Library	6	6
Computer Unit	5	2
Materials Science	3	1
TOTAL	27	14

Table 2. 2.

Very little use seems to be made of this facility in the Library by the academic staff.

(b) Microfiche (not Library catalogue).

In the evaluation study carried out very little information was collected on these materials, as the use of them appears to be very limited in comparison to the study packs although from a storage and point of view they have great advantages.

2. 5. Uses of Study Packs

When the study packs are issued to students in the Library they are stamped with the date and the period of the short loan (ie morning, afternoon or overnight), by the Library staff. By examination of these stamps in all the packs it is possible

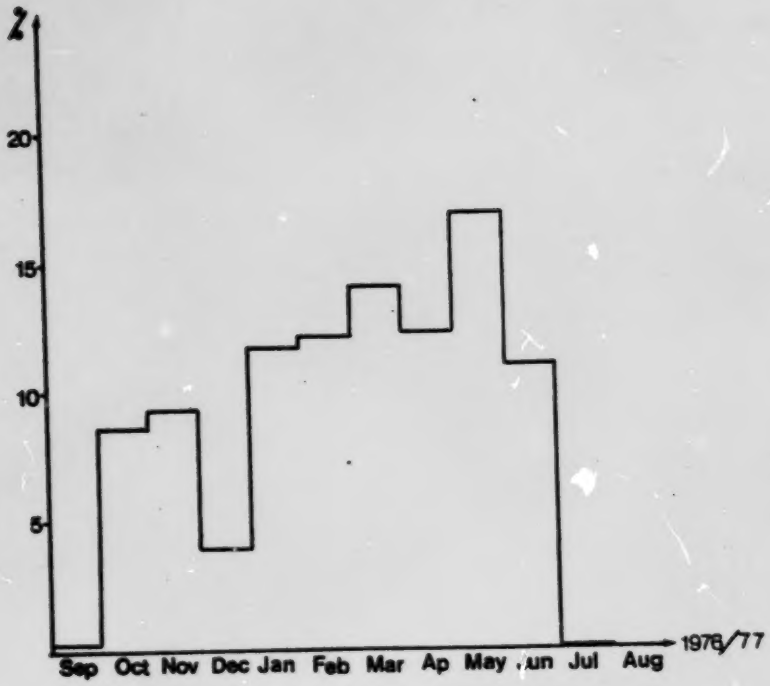


Figure 2. 2: Uses of Study Packs during 1976/77

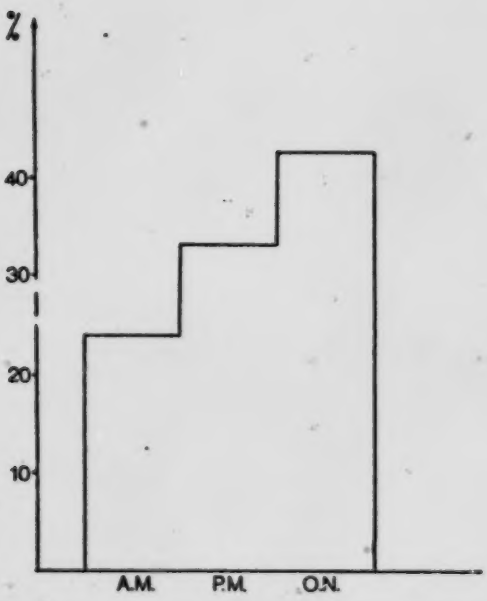


Figure 2. 3: Distribution of Uses during the Day

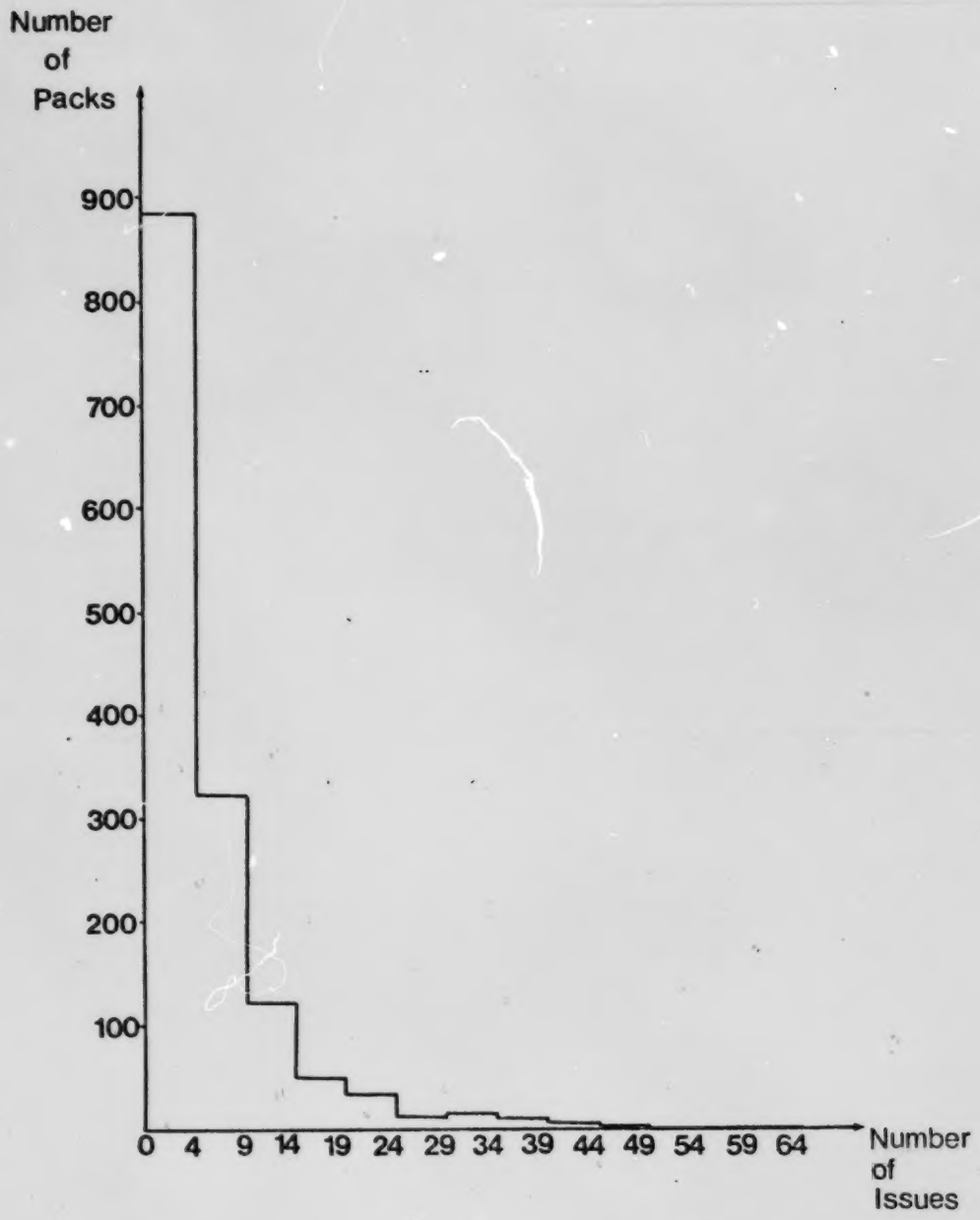


Figure 2.4 : STUDY PACKS - Issue Distribution

to obtain a distribution of uses by months during the year 1976/77. This is shown in Figure 2. 2.

Records

The figures were recorded on sheets, examples of which are given in the Appendix.

During 1976/77 there were 7815 issues of packs. Peaks in the distribution correspond approximately to end of semester and end of session examinations, and low points to vacation times. Obviously the use varies from pack to pack, but from an issue point of view the global information is the important one.

Figure 2. 3 shows the uses of study packs according to the time of the short-loan period. The overnight use obviously has the advantage of the extended time period, and this is an important factor with the students as many study packs provide a heavy work load. This is discussed in the appropriate section on student responses. (Harris and Kirkhope 1977a).

The issue distribution for each pack is shown in Figure 2. 4, giving a calculated median issue value of 4.11. Of the 886 packs in the 0-4 issues range, 385 packs had zero use during the year and 200 had only one use. The cost implication of this figure is discussed in the cost analysis (Harris and Kirkhope 1977a). Although the most common issue value for the packs is in the 0-4 range, there were 3 packs which had more than 50 issues in the year.

2. 6. Uses of Videocartridges

Since the videocartridges are on general access in the Library no system has been installed to keep a full check on the

use of the videocartridges. In the report on the pilot study carried out in the Autumn Term 1976 (Harris & Kirkhope 1977b) it was estimated that there was a maximum of 50 uses per week out of a possible maximum of 240 during this period. However, there have been periods during the year when night queueing has occurred for the 2 machines available, and times when the machines have had very little use.

2. 7. Use of other non-book materials

(a) Synchronised Tape/Slide

Again these are on open access and so no records are available on their use. There has been no queueing reported by students and from our observation these materials have had very little use.

(b) Microfiche

There seems to be considerable user opposition to these materials, and observation had indicated very little use.

2. 8. References

(1) HARRIS and KIRKHOPE (1977a) An Evaluation of Self Instructional Materials in the Library:

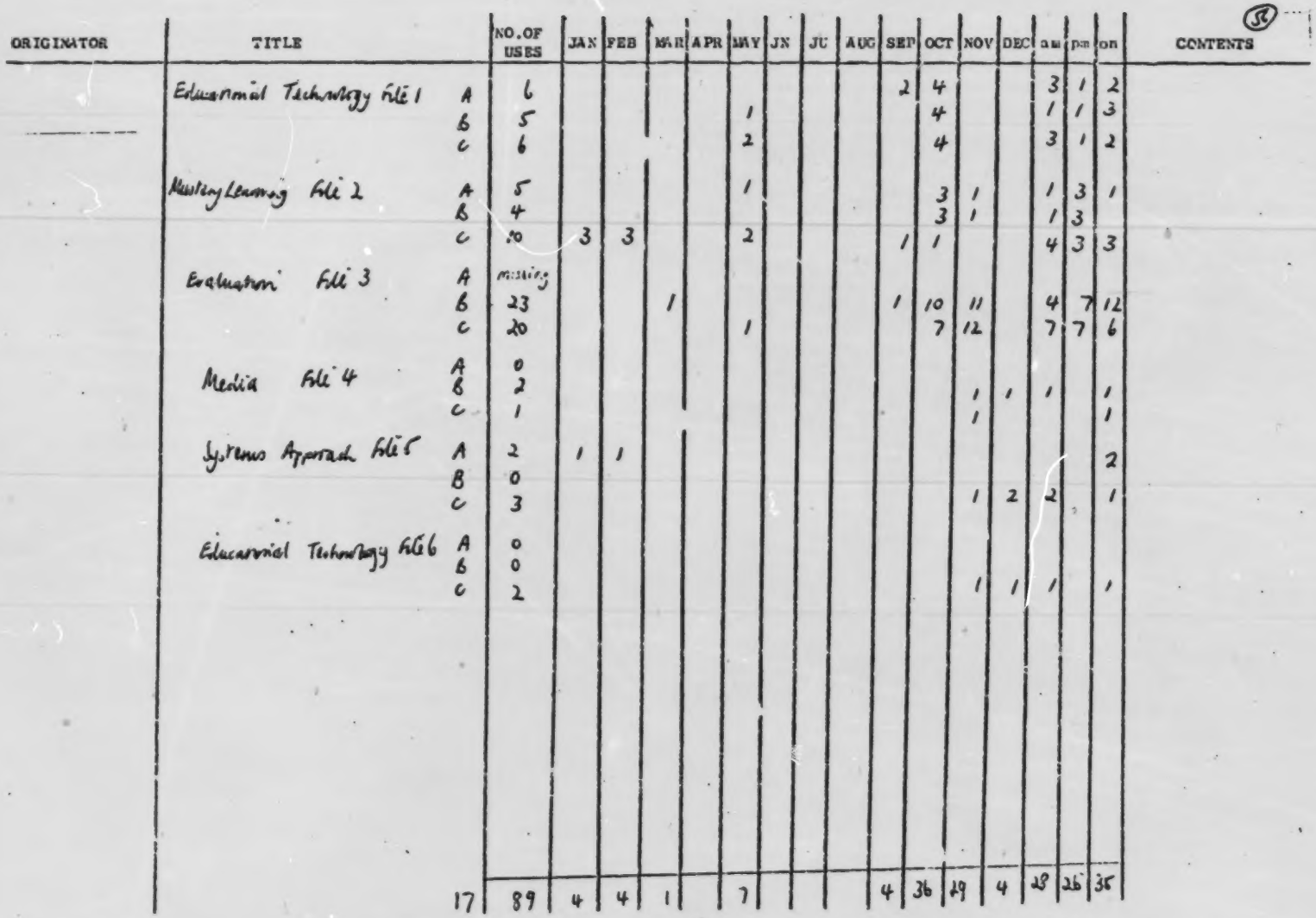
1. The Library Organisation and the Methods of Investigation
3. Student Reactions to Study Packs and Videocartridges
4. Feedback to Lecturers and the Library
5. Cost Analysis
6. Conclusions and Recommendations

Bath, University of Bath Educational Services Unit

(2) HARRIS and KIRKHOPE (1977b) An Evaluation of the Use of Self Instructional Materials in the Library, in HILLS, P.J. and Aspects of Educational Technology XI, London, Kogan Page

ORIGINATOR	TITLE	NO. OF USES	JAN	FEB	MAR	APR	MAY	JN	JU	AUG	SEP	OCT	NOV	DEC	CONTENTS (29)		
															ar.	pa	on
	British Fascism	47		6	7	6	4					14	9	1	11	25	11
	Fellow Travelling with Communism.	31	8	1			1					3	18		4	18	9
	The Reactionary & near Labour Left before 1921	25		5	5							15			3	8	14
	The 1906-1914 Liberal Governments	2		2													2
	The Definition of Political Propaganda	21					4	17							4	9	8
	Introductory Reading	16			2	7	4	3							8	6	2
	The formation of the Labour Party	24	8	8	2	2	1					3			7	5	12
	The General Strike	58	8	9	10	2	1					14	9	5	12	21	25
	The Decline of the Liberal Party	31	3	1			1					15	1		5	12	14
	Propaganda in Mao Tse Tung's China	12					3	9							1	5	6
	The Selling of the American President 1952-1972	41			4	3	18	16							10	15	16
	British Propaganda in the first & second World Wars	42			4	4	22	12							9	13	20
		12	350	27	42	34	24	59	57			64	37	6	74	137	189

Figure 2.5 : Example of the recorded uses of Study Packs
(reduced from A4 originals)



ORIGINATOR	TITLE		NO. OF USES	JAN	FEB	MAR	APR	MAY	JN	JU	AUG	SEP	OCT	NOV	DEC	am	pm	on	CONTENTS
	Educational Technology file 1	A	6									2	4			3	1	2	
		B	5					1					4			1	1	3	
		C	6					2					4			3	1	2	
	Missing Learning file 2	A	5					1					3	1		1	3	1	
		B	4										3	1		1	3		
		C	10	3	3			2				1	1			4	3	3	
	Evaluation file 3	A	missing																
		B	23			1						1	10	11		4	7	12	
		C	20					1					7	12		7	7	6	
	Media file 4	A	0																
		B	2											1	1	1		1	
		C	1											1				1	
	Systems Approach file 5	A	2	1	1													2	
		B	0																
		C	3											1	2	2		1	
	Educational Technology file 6	A	0																
		B	0																
		C	2											1	1	1		1	
		17	89	4	4	1		7				4	36	29	4	29	26	35	

Figure 2.6: Example of the recorded uses of Study Packs (reduced form A4 original)

OCCASIONAL PUBLICATION NO. 3

AN EVALUATION OF THE USE OF SELF INSTRUCTIONAL MATERIALS IN THE LIBRARY

3. Student Reactions to Study Packs and Videocartridges

Educational Services Unit

University of Bath

3. STUDENT REACTIONS TO STUDY PACKS AND VIDEOCARTRIDGES

3. 1. Introduction

This section is based on the comments made by students either in writing or during interviews. The written comments were on questionnaires (two forms, see appendix) or free response. Interview comments were from informal interviews in the Library. (See also Section 1, Introduction).

From an analysis of the three collecting methods and responses, the top 19 responses are shown in Table 3. 1 for Study Packs and Table 3. 2 for Videocartridges. The responses will be used as the basis for the later sections.

The sections of the report will be:

Distribution of users by year of student.

Access to materials, source of information and problems
(includes rank orders 10, 12 for Study Packs;
3, 8, 11 for Videocartridges).

Study Packs:

How used (rank order: 1, 3, 5, 7, 15, 16)
Loan period (rank order: 2, 4, 9, 11)
Basis of provision (6, 14, 18)
Where used (8, 13)
Library (19)

Videocartridges:

How used (rank order: 1, 2, 4, 5, 6, 7, 10, 15)

Tape Slide & Microfiche

Overall rank order	Comment	Short Questionnaire	Long Questionnaire	Interview
1.	Use for Essay	1+	3+	5+
2.	Inadequate loan period	2	9=	1
3.	Use with lecture course	10=	2+	6=+
4.	Pack too long	3	7	9=
5.	For seminar/discussion	(11=)	4	6=+
6.	Book shortage	5=	(13=)	8=
7.	Use for revision/exams.	8	6+	(21=+)
8.	Own room overnight	-	5*	4*
9.	More copies	4	-	9=
10.	Papers missing	5=	(18=)	L
11.	Pack not there when required	9	-	(11=)
12.	No microfiche	-	L	3+
13.	Use in Library	-	1*	-
14.	Crystallise issues	5=	-	-
15.	Take notes	-	-	2+
16.	Essential reading	-	8	-
17.	Need for index of articles/content	-	9=	-
18.	Information not in books	10=	-	-
19.	Library helpful	-	-	11=

Key Underlining - unsolicited;

Ranks below 10 are based on few responses and are shown with brackets e.g. (12=);

\+ - Answer to general question;

* - Answer to specific question;

L - 1 or 2 responses only;

Table 3.1 Study Pack Rank Orders of Responses. (The final rank is derived from adding the rank orders of the collecting methods).

Overall rank order	Comment	Long Questionnaire	Interview
1.	Browsing/interest	3+	2=
2.	Use handout/notes	5*	2=
3.	Need for catalogue (improvement)	6=	5-
4.	No notes available	L*	1=
5.	Lecturer/School please tell us	6=	8=
6.	Relates to lecture	1+	-
7.	Related to course	2+	-
8.	Specific request for production change	4+	-
9.	Simple to operate	-	4
10.	Run straight through	-	5=+
11.	Up date	6=+	-
12.	Improve quality	6=	-
13.	Running noise - tiring	6=	-
14.	Improve sound	6=	
15.	Replay/rewind used	-	8=

Key Underlining - unsolicited;

\+ - Answer to general question;

* - Answer to specific question;

L - 1 or 2 responses only;

Table 3.2 Videocartridges: Rank Order of responses
(The final rank is derived from adding rank orders of the collecting methods).

3. 2. Distribution of users by year of student

The distribution is dependent on students who have responded to questionnaires and interviews. Not all students provided information on their year. However, the distribution does relate to expectations for the systems provided. A large number of potential users would occur for students on early parts of their course, be it undergraduate or taught postgraduate.

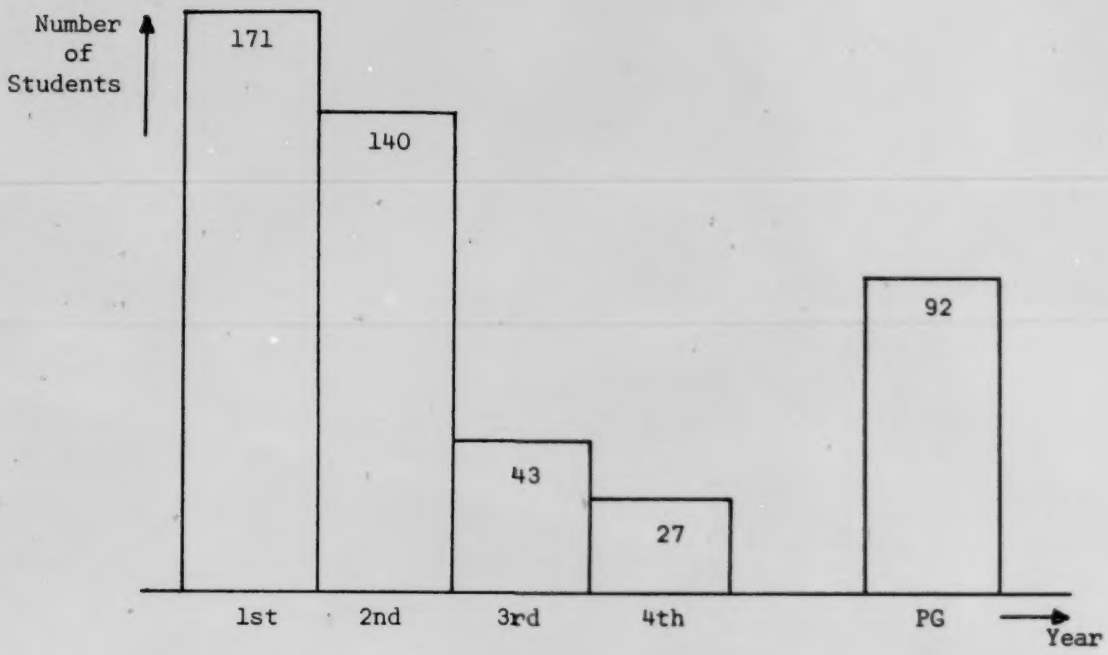


Figure 3. 1 Distribution of users who were contacted

The postgraduate numbers are probably inflated in relation to the population of users. Two groups of students studying on taught courses leading to master degrees were particularly assiduous in their responses.

3. 3. Access to materials and source of information

This information on source of information was only collected from students who were interviewed. The question was only asked where it was appropriate to answers to other questions. The main source of information about study pack numbers was from lecturers (56 responses out of 59 where information was given) with Library staff (2 responses) and other students (1 response) as the other sources. The predominance of the lecturer would be expected from the method of organisation.

For videocartridges the pattern is similar, but with less dominance from the lecturer. One feature that did occur was the browser - generally students who found the facilities, not having known that there were television playback facilities in the Library.

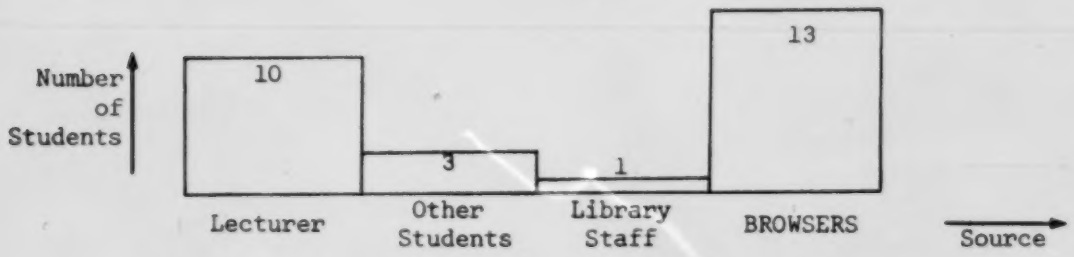


Figure 3. 2 Videocartridges: Source of Information

Criticism of the poor publicity given to the videocartridge and tape-slide materials occurs in several student's comments:

"Only found system of video replay by chance by talking to a member of staff". (This was an OU series specially recorded for the student's course).
"More information and consultation with appropriate departments".
"Hard to find tape - would like catalogue".
"Found by looking along shelves".
"Cataloguing terrible - took 10 minutes to find cassette required".

"More emphasis on the availability of this material is required within the School".

The problems of queueing seem to confirm problems that were observed:

"Machine already in use when arrived - shown how to operate it by other students. Thought instructions could have been placed in a more prominent place".
"Machinery simple to use. Had tried last week - both rooms occupied. No difficulty today".
"Several times have come and found machine out of action - no queueing problem".

The study packs provided different problems. The main access problem was associated with other students already having the pack out.

The main complaint related to missing papers. These will be covered in more detail in the next part.

3. 4. How Used

Study Packs

As has been shown in Table 3. 1 the methods of use featured high on the rank orders, although these responses were solicited. Examples of student comments are given:

HOW USED:

Used for essays/assignments (66 responses)
"Compulsory reading for assignment".
"Main basis for writing an essay".
Used with lecture course (48 responses)
"As an integral stepping stone to our exploration of literature".

"General background reading".

"Guide to published material ....."

For seminar/discussion (42 responses).

"... given handouts - must read before seminar next week. Pack on list".

"Presenting seminar on Monday ...".

"Read specific articles for seminars".

"Specific reading for group discussion".

Revision/exams (24 responses).

"Recommended by lecturer for revision".

"Useful for finding facts connected with multiple choice test".

"Only read one article recommended by another student - read for revision for exam".

Take notes (13 responses).

"Read make notes - if too much to read either photocopy or borrow again".

"Read relevant parts, take notes - usually associated assignment".

"Make notes for an essay".

"Read, make notes then precis ..."

Essential reading (9 responses).

"Papers related to worksheet goals".

LOAN PERIOD

Inadequate loan period (41 responses).

"I feel 24 hours loan would be more relevant than 4 hour ...".

"Difficult to get hold of, especially in exam times - loan period of 4 hours rather short".

"4 hours not long enough".

Pack too long (34 responses).

"Some packs very large - too much stuff in for 1 period's work".

"Some lecturers' packs far too much redundant literature".

"Had renewed pack 6 times - too much to read: 1000 pages!".

More copies (20 responses)

"Only one pack available. One pack not enough for entire class".

Pack not there when requested (14 responses).

"Reserved copy missing".

"Out, not returned".

"Reservation system does not work well - pack not there when reserved".

BASIS OF STUDY PACK PROVISION

Book shortage (19 responses).

"Material in study packs not in the Library. It is a good service for what is an incomplete Library".

"For this part of the course where books are virtually non-existent, it would not be possible to do the work without them".

Crystallise issues (10 responses).

"Study packs more useful than books as they contain material that is thought important by the lecturer and do not contain readings that are unnecessary".

Information not in books (7 responses).

"Up to date opinions useful".

"It is a collection of newspaper articles ...".

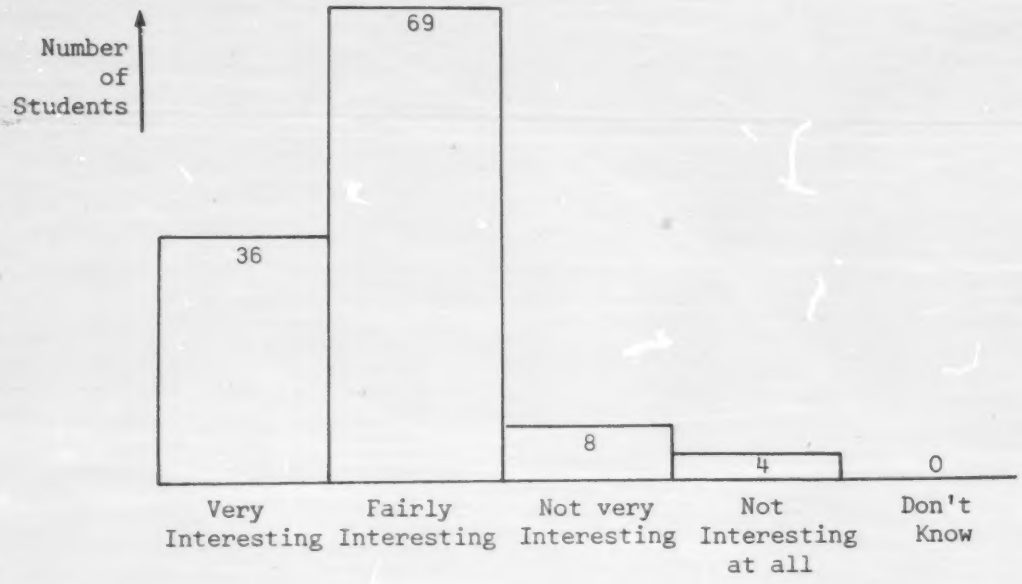
WHERE USED

This can be presented in two ways: students use study packs at home, in the Library or both. In this section those who use in both have been counted in each.

Use in the Library (67 responses).

Use in own room (40 responses).

Did you find this material interesting?



How difficult did you find this material?

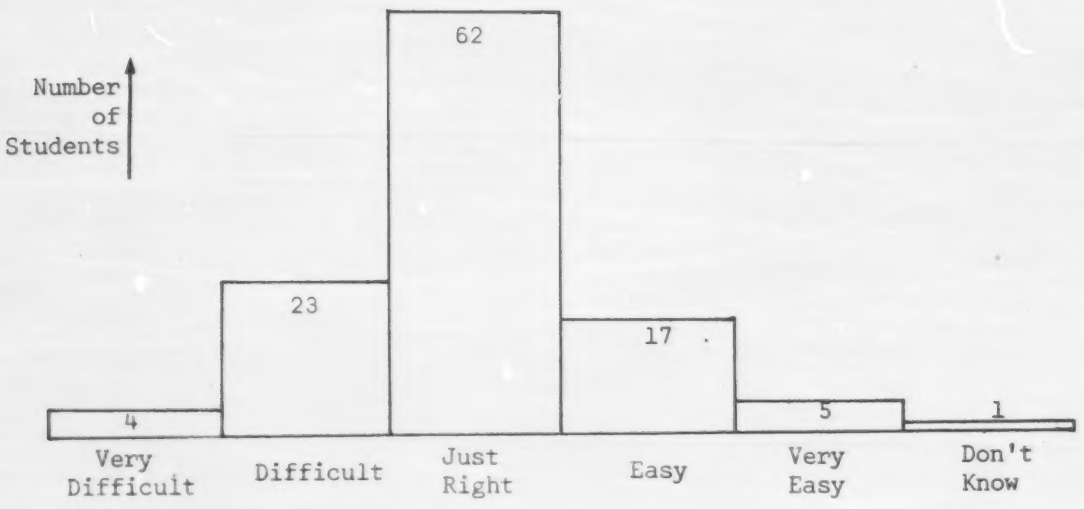
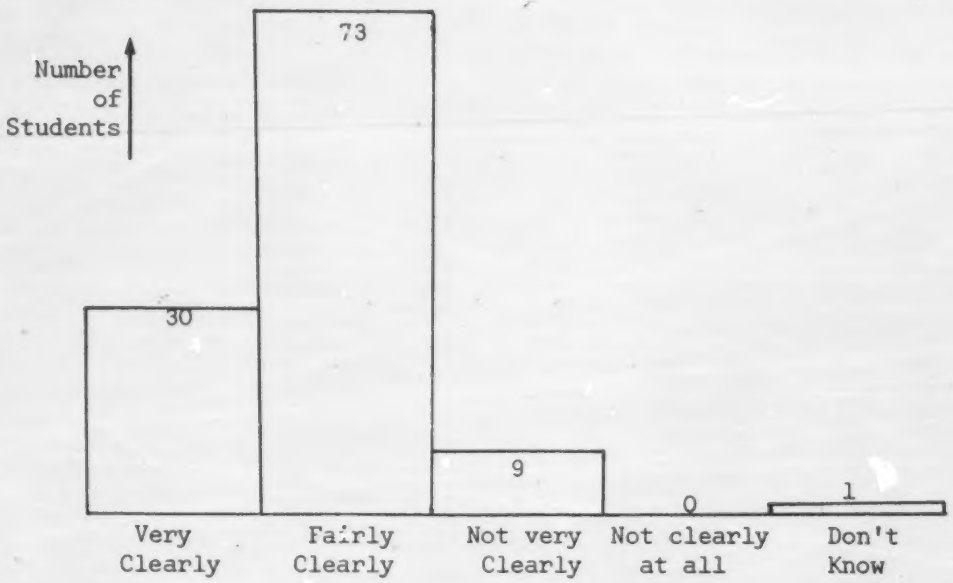


Figure 3. 3 Study Pack Long Questionnaire Responses

How clearly do you think this material put its main points over?



How useful did you find any printed handout for this programme?

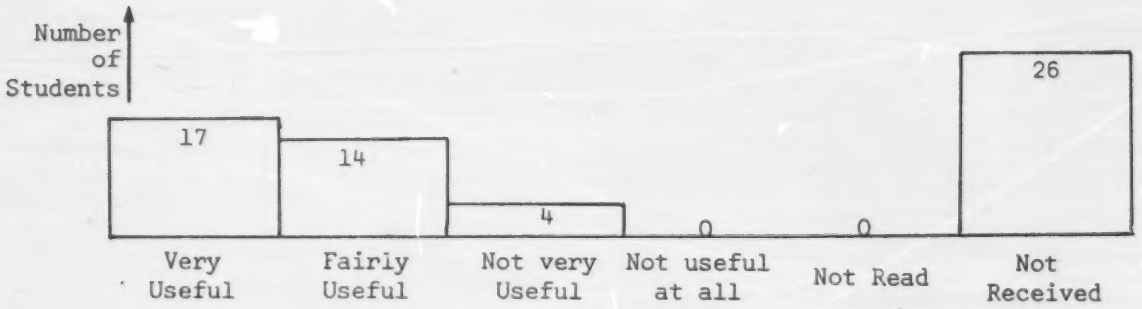


Figure 3. 3 Study Pack Long Questionnaire Responses

PROBLEMS

Papers missing (15 responses).

"Often papers missing, others on course complain - like contents check".

"Steps needed to prevent papers being taken".

Not microfiche in place of paper copy (13 responses).

"Microfiche: limited where can use".

"Difficulty in reading for a long time from microfiche reader".

LIBRARY (6 responses)

"Library staff very helpful".

Further responses are from small groups of students. These have not been included. On the long questionnaire were four scales and the responses to those for study packs are shown in Figure 3. 3. It is interesting to note the high rating given to support material (e.g. handouts and worksheets) when it is provided.

Videocartridges

As has been shown in Table 3. 2 the methods of use was the main feature on the rank orders. Examples of student comments are given:

HOW USED

Browsing/Interest (20 responses).

"Personal interest".

"Viewed for general interest".

Use handout/notes (12 responses)

"Consolidated material already read in associated book".

No notes available (9 responses)

"Access to the appropriate OU text would be helpful".

"Printed material would be helpful for formulae".

Lecturers/School please tell us (8 responses)

"Only found system of video replay by chance by talking to ... a member of staff".

"More emphasis on the availability of this material is required within the School".

Related to lecture (29 responses)

"Aid to understanding theory".

"Visual aid".

Related to course (17 responses)

"Supplementary"

"It is our course".

Run straight through (5 responses)

"Ran straight through".

Replay/rewind used (3 responses)

"Stopped, rewound and replay when unsure".

Up-date (4 responses)

"Up-date i.e. use new pence instead of £ s d".

Improve quality (4 responses)

"Bad recording made understanding difficult".

Running noise tiring (4 responses)

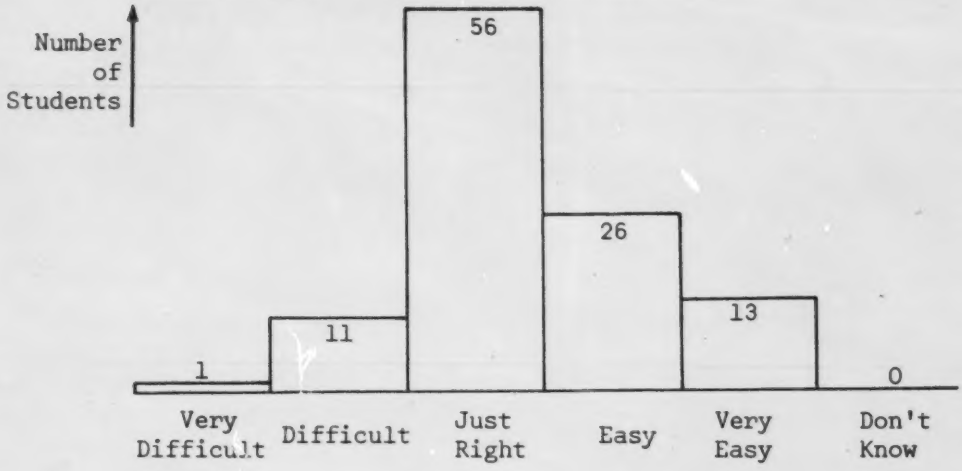
"Running noise tiring".

Improve sound (4 responses)

"Poor sound".

Further responses are from smaller groups of students. These have not been included. On the long questionnaire were four scales and the responses to these for videocartridges are shown in Figure 3.4. It is interesting to note the group viewing, bearing in mind 24 questionnaires each relate to a group of 2-6 students. A noticeable difference of distribution shows on the ease/difficulty scale when compared with the study packs.. On the whole students find video material easy. Again, those who received associated printed material were enthusiastic, but a large number showed "not received". In many cases these were Open University programmes, the books associated being on the shelves in the Library.

How difficult did you find this material?



How clearly do you think this material put its main points over?

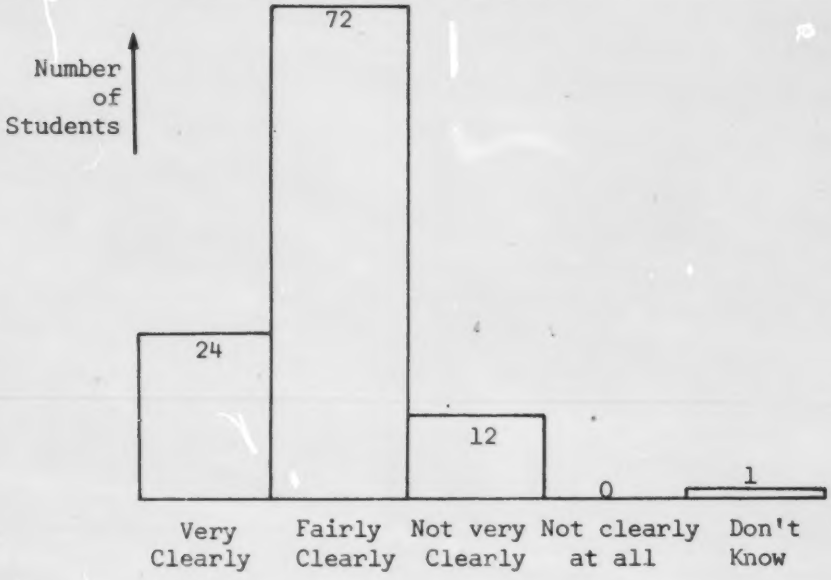
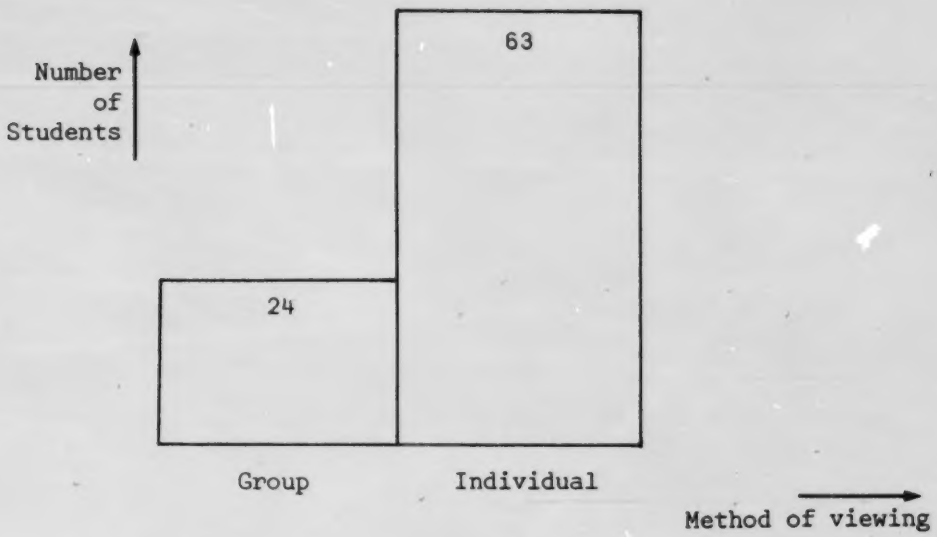


Figure 3. 4 Videocartridges Long Questionnaire Responses

Viewing as Group or Individual



Did you find this material interesting?

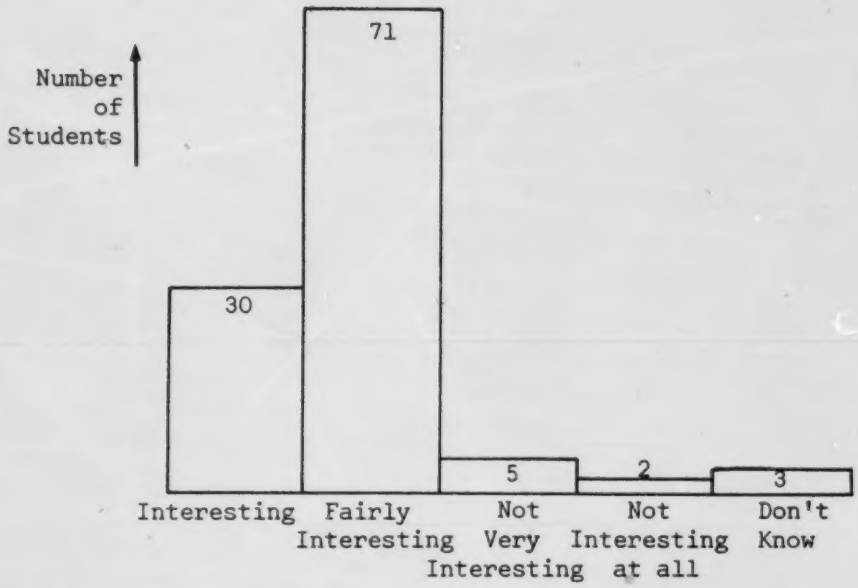


Figure 3. 4 Videocartridges Long Questionnaire Responses

How useful did you find any printed handout for this programme?

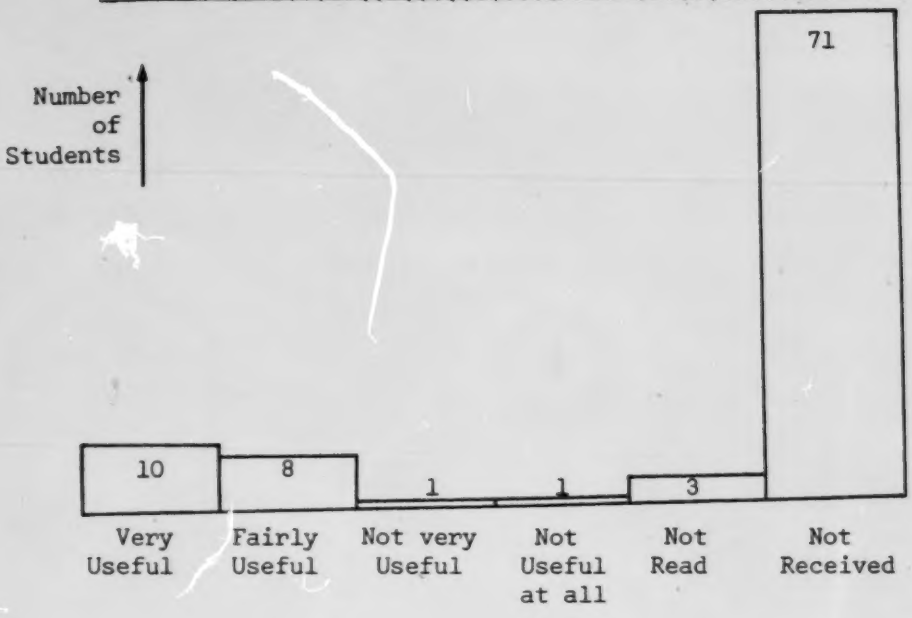


Figure 3. 4 Videocartridges Long Questionnaire Responses

Tape Slide and Microfiche

Very little information was collected. The comments only relate to one or two students and are not comparable in generality with those shown for the study packs or the video-cartridges.

Two students requested slides to be numbered in tape slide sequences so that it was possible to re-synchronise or check that the synchronisation was correct. The users were using material that either related to lectures or acted as revision.

3. 5. Summary

The data presented represents sampling of the whole as shown in the Table 3. 3.

	Study Packs	Video cartridges	Tape Slide
Total number	1457	250	20
Total number of lecturers using materials	86	35	14
Number of lecturers whose material was sampled	46	16	3

Table 3. 3. Sampling of materials.

For the two main elements of the study the sampling was encouraging. There was no deliberate attempt to improve the sampling across the materials although there was across the students.

The main problems with study packs relate to access and to missing papers. The main problem for videocartridges

related to access because of a) lack of information passed to students; b) a poor catalogue.

The majority of students use study packs specifically because they relate to the course. The packs are not on open access nor is a catalogue by pack title that is accessible to students.

For videocartridges there are a significant number of browsers. The communication system is sometimes from student to student, both on availability and on how to operate the equipment.

REFERENCES

HARRIS, N.D.C. & KIRKHOPE, S. (1977a) "An Evaluation of the Use of Self-Instructional Materials in the Library" in HILLS, P.J. and LEEDHAM, J. (Ed.) Aspects of Educational Technology, XI, London, Kogan Page.

HARRIS, N.D.C. & KIRKHOPE, S. (1977b) "The Evaluation of Self-Instructional Materials in the Library", Bath, University of Bath Educational Services Unit.

1. The Library Organisation and Methods of Investigation.

2. Distribution of Study Pack, Videocartridge, Synchronised Tape Slide and Microfiche Use.

4. Feedback to Lecturers and the Library.

5. Cost Analysis.

6. Conclusions and recommendations.

KIRKHOPE, S. (1977) "Students' reactions to Open University Material in the Library" Educational Services Bulletin No. 18, 14-18, Bath, University of Bath.

OCCASIONAL PUBLICATION NO. 3

AN EVALUATION OF THE USE OF SELF INSTRUCTIONAL MATERIALS IN THE LIBRARY

4. Feedback to Lecturers and Library

Educational Services Unit

University of Bath

4. 1. Introduction

In order to publicise the project it was decided at an early stage to circulate all lecturers with resources in the Library. An initial statement was sent soon after the initiation of the project. (See 4. 2.) A further report was sent in January 1977 incorporating detailed information to lecturers. The basic report is in Section 4. 3. A final report was circulated in November 1977 as in Section 4. 4. An example of the sort of information sent to individual lecturers is shown in Section 4. 4.

When group interviews were carried out a complete transcript was sent to the lecturer and to the students involved. They were asked to provide reactions a) that it was a fair reflection of what took place and b) for alterations to the materials for the following year. Examples(s) of transcripts are included in Section 4. 5.

The details of the methods of collection are in Report No. 3 Student Reaction to Study Packs and Videocartridges.

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

TO:

FROM: Dr. Duncan Harris, Mrs. Susan Kirkhope

Evaluation of Non-Book Resources in the Library

(study packs, microfiche excluding catalogue, video cartridges, synchronised tape/slide etc.)

Introduction

A small grant has been awarded by the Nuffield Foundation for this work which will be carried out in 1976/7. There has been a steady increase in the number of these resources in the Library, particularly study packs (now over 700) and videocartridges (now over 200). The evaluation is investigating the staff and student reactions to the materials, the cost of production and use, and the effectiveness.

This is a brief account of the pilot study which has been carried out in October along with data relating to specific materials. A copy is being sent to you because you have some materials in the Library.

General Information

a) Study Packs

Most information is at present available on the study packs. Their use in previous years has been analysed as far as records allow. From these a distribution of use in each month of the year and over the three short loan periods operated by the Library can be roughly deduced. These are shown on the attached charts.

At present no check is made on the contents of the study pack except by the originator, the Library staff appear to have enough difficulties dealing with the issue and return together with those of the books in the short loan collection.

We have put evaluation forms, of the type attached, in each study pack. A summary of data is attached relating to any originated by you, if we have had any returned. If this information is useful to you please encourage your students to complete the forms when using the packs. If you would like to substitute a questionnaire of your own design please let us know.

In addition, within the constraints of our time and the short loan issue system, we have interviewed students about their use of study packs. Copies of summaries of the responses in relation to your material are enclosed.

At present students have no means of accessing study packs unless advised to do so, although it would appear that some may be of considerable general interest.

b) Video cartridges

A catalogue of available videocartridges, including Open University and BBC educational material is in the Library, rooms 4.30 and 4.31. These are classified under the School of the originator.

We are not able to monitor the use of the videocartridges as effectively as for the study packs because they are on open access. However students

do fill in the evaluation forms and where possible we interview them about their use of the materials. Summaries relating to any materials you have asked for are attached. Again if this is useful to you please encourage your students to complete forms. It is clear that some students are browsing.

c) Other materials

The remainder of the resources appear to have had little use so far.

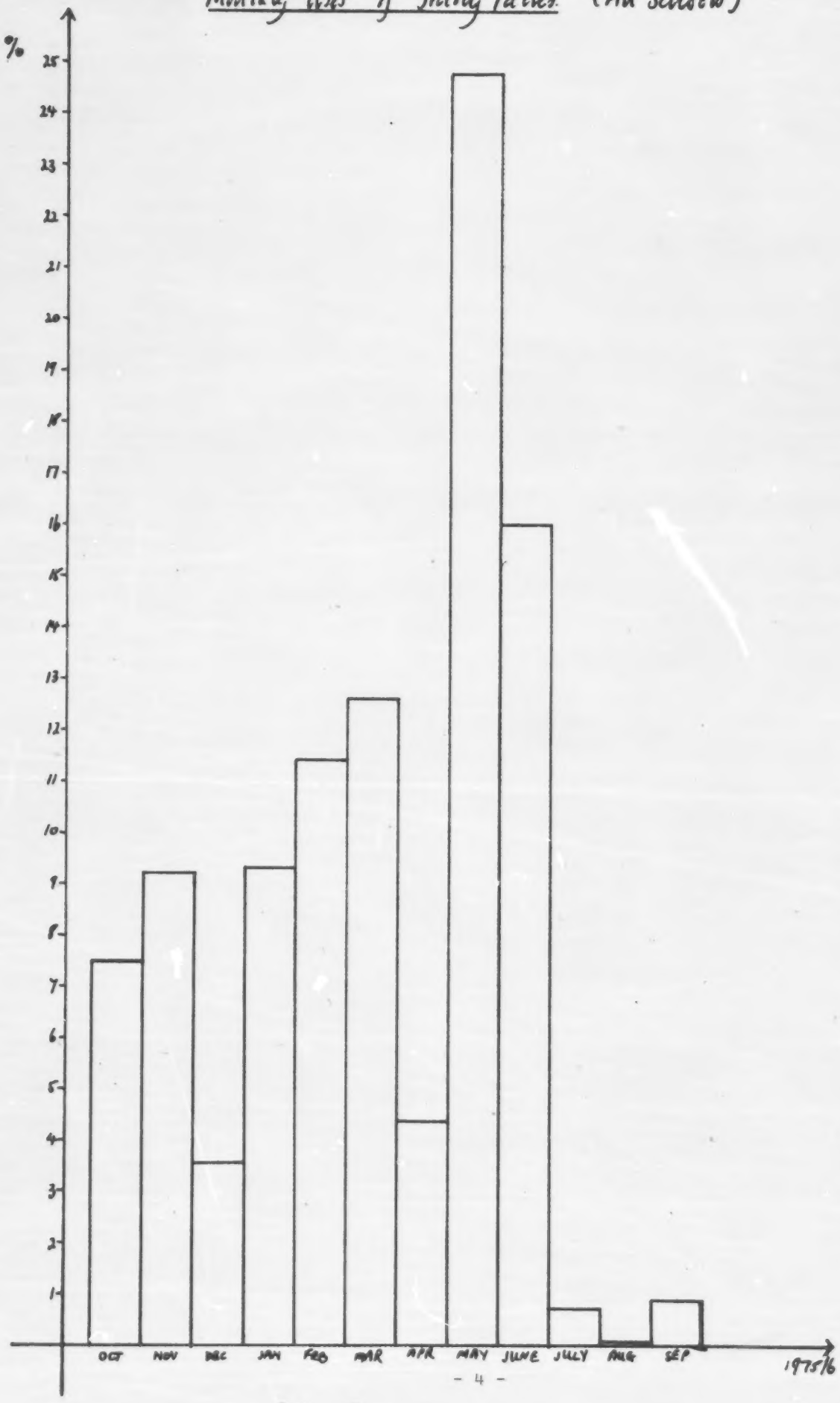
Proposed Future Work

We would like to interview groups of students from courses using the materials. In particular we would like to have groups including students who did NOT use the materials. If you would object to your students being involved please let us know. In addition we would like to talk with the originator of materials when we have seen the group.

We are attempting to cost the materials and their use; we shall continue to collect questionnaires and to interview students on their use of and attitudes to the materials.

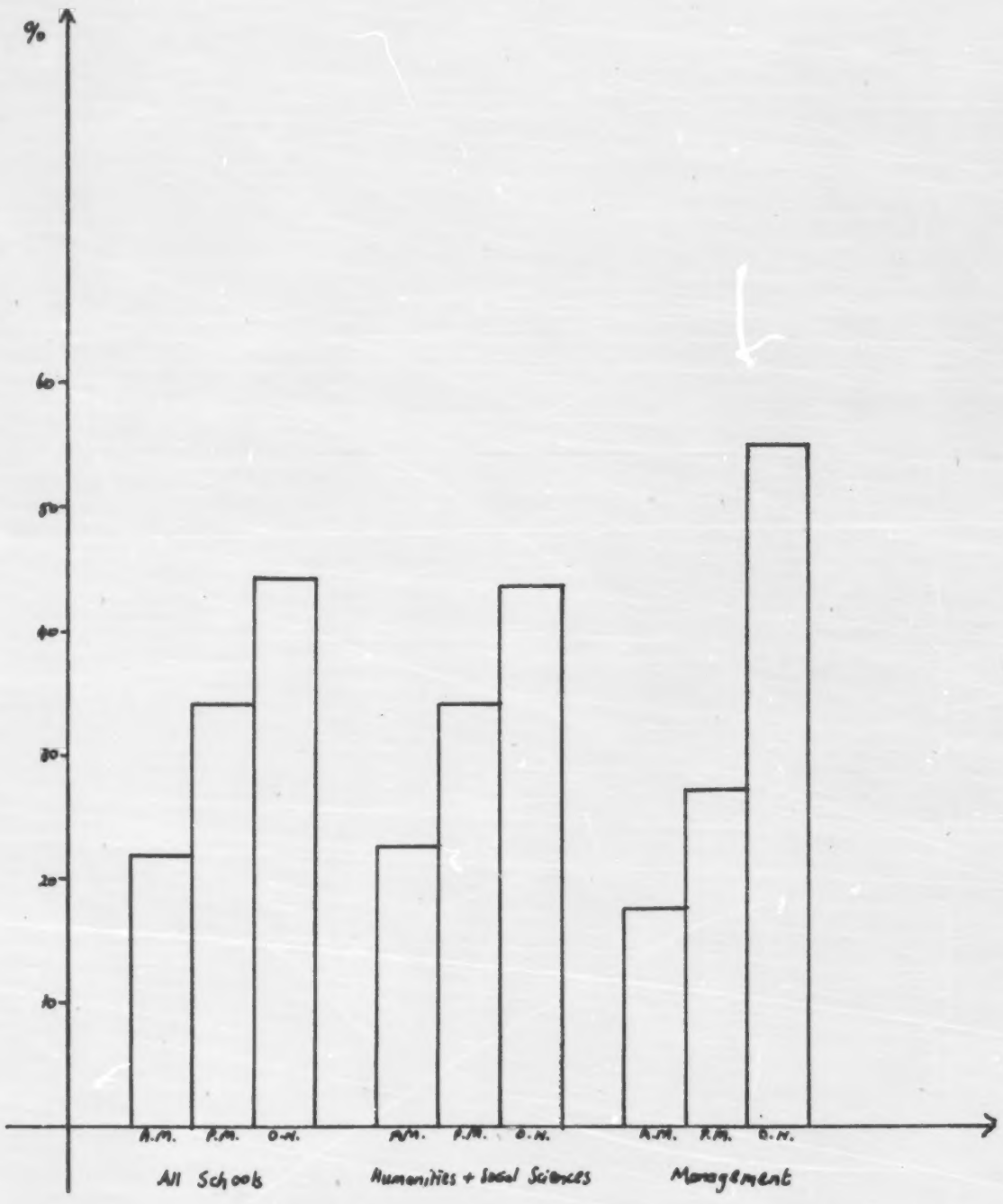
A further report will be circulated to you in January, and we should be delighted to discuss any aspect of this work with you, particularly the way in which feedback can continue to you after the period of the grant.

Monthly Ulcers of Shooky Cases (All Schools)



58 Figure 1

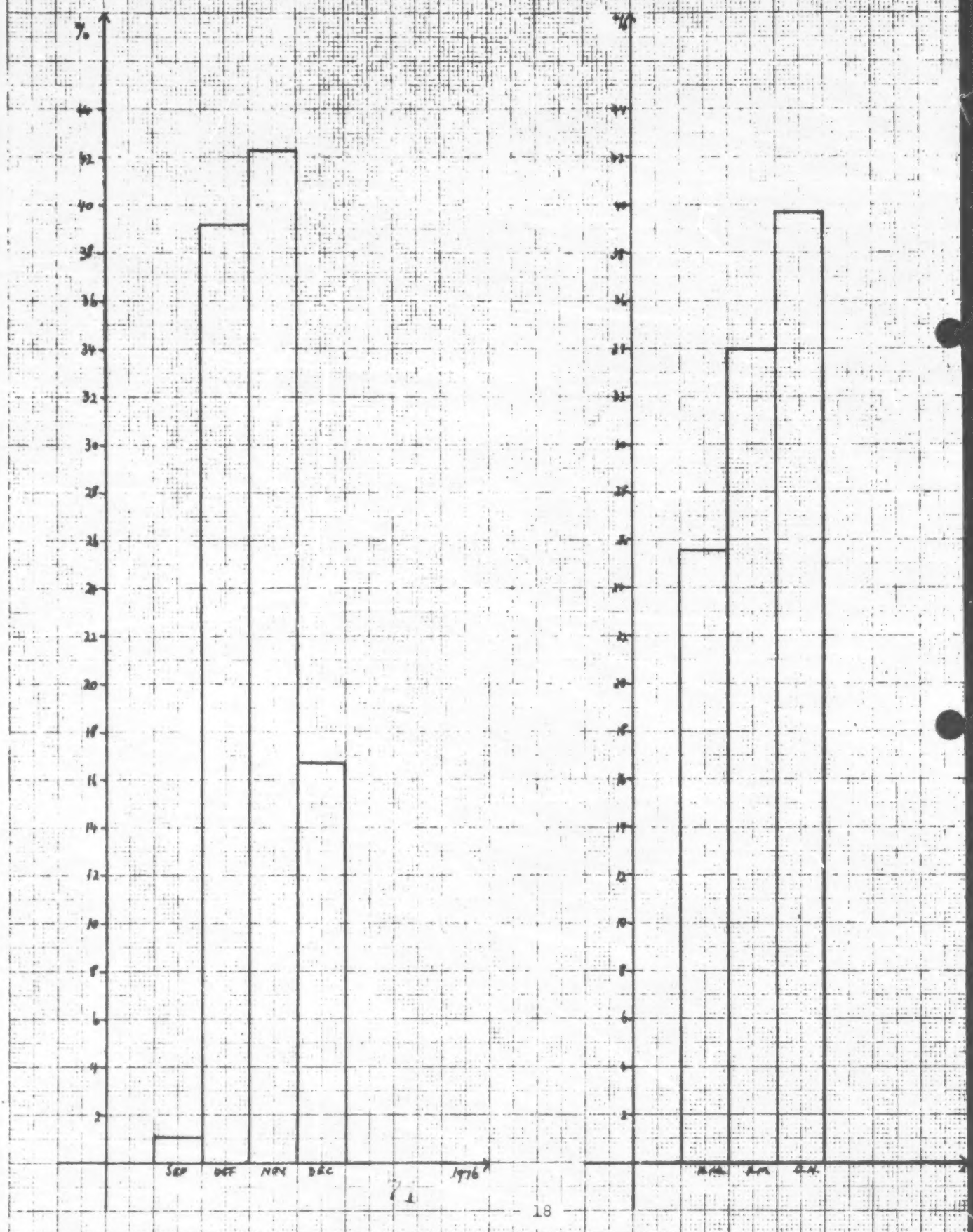
Figure 2 — Period of Short Loan.



Period	All Schools		H + S.S.		Management	
	No.	%	No.	%	No.	%
Morning	454	21·8	290	22·5	87	17·6
Afternoon	713	34·0	435	33·80	134	27·0
Over Night	923	43·5	560	43·5	273	55·0

Monthly Visits of Study Visits — Period of Short Loan

Autumn Term 1976



UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

Study Pack

HARRIS D
ESU
2H

Evaluation Form

Please complete a form for each set of material you use (study pack, tape-slide programme, television programme)

1. School: Education ||||-||

Viewing: class/group/individual

Month and year of viewing:

Year/semester of group/individual: M Ed ||||-||

Please circle the code corresponding to your answer, like this (2).

2. Title of material:

Educational Technology I
Behavioural Objectives

3. Where did you use the material?

Lecture Theatre (Room .....)	1
Library ||||-||	2
Elsewhere (specify)	3

4a. Did you find this material interesting?

||	Very interesting	1
||||	Fairly interesting	2
		Not very interesting	3
		Not interesting at all	4
		Don't know	5

4b. Which parts, if any, of this material did you think were boring?

Part of "Nature of Planning" |
N/A ||||
Article by Mitchell |
None |

5a. How difficult did you find this material?

		Very difficult	1
||	Difficult	2
|||-|	Just right	3
		Easy	4
		Very easy	5
		Don't know	6

5b. Which parts, if any, of this material did you find particularly difficult?

N/A ||||
Longer Rita article |
Article by Mitchell |
None |

6. What do you think were the main points the material was trying to put across?

7a. How clearly do you think this material put its main points over?

	Very clearly	1
|||-|	Fairly clearly	2
	Not very clearly	3
	Not clearly at all	4
	Don't know	5
	N/A	

7b. Which parts of the material, if any, did you think could have been made clearer?

1st paragraph systematic approach |
N/A ||
Longer Rita article relating Rational ideas |
None |
Notion of structure of knowledge |

Continued over.

8a. How useful did you find any printed handout for this programme?

/	Very useful	1
/	Fairly useful	2
	Not very useful	3
	Not useful at all	4
	Not read	5
///	Not received	6
//	No answer	

8b. either If you thought the printed handout was not useful, why was this?

_____

_____

_____

or Specify what printed handout would have been useful

_____

_____

_____

_____

9. If this material were to be re-made, what changes do you think should be made?

None // Central core should be summarised /

N/A /

Reproduction of text should be clearer + more effectively bound + set out /

Should be follow up work rather than preceding work /

Should be more self-contained ie. more exhaustive /

10. Are there any other comments you would like to make about this material?

None // Value of book: best source of critical material /

N/A ///

Very useful /

11. Should this material be available in the Library? /// //

Yes 1
No 2

12. How is this material used in relation to your course?

Useful material for Ed. Tech. module / Gives contrary view /

As a guide to topics for study /

Core material /

Directly related to essay assignment // Answer to Worksheet I /

13. Other comments:

_____

_____

_____

Signed .....(Your name will NOT be used in any information passed on to anyone else)

THANK YOU VERY MUCH FOR YOUR HELP

PLEASE RETURN THIS FORM TO THE LIBRARY ISSUE DESK
OR THE EDUCATIONAL SERVICES UNIT 3E

Study Pack HARRIS. P. ESU 24

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

Evaluation Form

Please complete a form for each set of material you use (study pack, tape-slide programme, television programme)

1. School: Education /

Viewing: class/group/individual

Month and year of viewing:

Year/semester of group/individual: M.Ed /

Please circle the code corresponding to your answer, like this (2).

2. Title of material:
Pack 2 Mastery Learning

3. Where did you use the material?

Lecture Theatre (Room .....)	1
Library /	2
Elsewhere (specify)	3

4a. Did you find this material interesting?

/ Very interesting	1
Fairly interesting	2
Not very interesting	3
Not interesting at all	4
Don't know	5

4b. Which parts, if any, of this material did you think were boring?
Sherman's Personalised System of Learning /

5a. How difficult did you find this material?

Very difficult	1
Difficult	2
/ Just right	3
Easy	4
Very easy	5
Don't know	6

5b. Which parts, if any, of this material did you find particularly difficult?
None /

6. What do you think were the main points the material was trying to put across?

7a. How clearly do you think this material put its main points over?

/ Very clearly	1
Fairly clearly	2
Not very clearly	3
Not clearly at all	4
Don't know	5

7b. Which parts of the material, if any, did you think could have been made clearer?
None /

8a. How useful did you find any printed handout for this programme?

Very useful	1
Fairly useful	2
Not very useful	3
Not useful at all	4
Not read	5
/ Not received	6

8b. either If you thought the printed handout was not useful, why was this?

or Specify what printed handout would have been useful

9. If this material were to be re-made, what changes do you think should be made?
Omit Thomas's article /

10. Are there any other comments you would like to make about this material?
None /

11. Should this material be available in the Library? /

Yes	1
No	2

12. How is this material used in relation to your course?
Individualised instruction /

13. Other comments:

Signed .....(Your name will NOT be used in any information passed on to anyone else)

THANK YOU VERY MUCH FOR YOUR HELP

PLEASE RETURN THIS FORM TO THE LIBRARY ISSUE DESK
OR THE EDUCATIONAL SERVICES UNIT 3E

Study Pack

HARRIS

Esu

2H

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

Evaluation Form

Please complete a form for each set of material you use (study pack, tape-slide programme, television programme)

1. School: Education II

Viewing: class/group/individual /

Month and year of viewing:

Year/semester of group/individual: M.Ed II

Please circle the code corresponding to your answer, like this (2).

2. Title of material:

S/3 Evaluation

3. Where did you use the material?

Lecture Theatre (Room .....)	1
Library /	2
Elsewhere (specify) Lib Annexe /	3

4a. Did you find this material interesting?

Very interesting	1
// Fairly interesting	2
Not very interesting	3
Not interesting at all	4
Don't know	5

4b. Which parts, if any, of this material did you think were boring?

None (should not read out) /

Seveda Article /

5a. How difficult did you find this material?

Very difficult	1
Difficult	2
// Just right	3
Easy	4
Very easy	5
Don't know	6

5b. Which parts, if any, of this material did you find particularly difficult?

None /

No one /

6. What do you think were the main points the material was trying to put across?

Elements of evaluation - Types & applications /

Types of evaluation & measurement /

7a. How clearly do you think this material put its main points over?

Very clearly	1
// Fairly clearly	2
Not very clearly	3
Not clearly at all	4
Don't know	5

7b. Which parts of the material, if any, did you think could have been made clearer?

None /

Meaning of domain referenced testing /

8a. How useful did you find any printed handout for this programme?

Very useful	1
/ Fairly useful	2
Not very useful	3
Not useful at all	4
Not read	5
/ Not received	6

8b. either If you thought the printed handout was not useful, why was this?

No ans /

or Specify what printed handout would have been useful

No ans /

9. If this material were to be re-made, what changes do you think should be made?

Numbering streamlined on cycle / different to read

No ans /

10. Are there any other comments you would like to make about this material?

Some pages missing in each pack - too many pages impossible to read (combach cumbersome (for reproduction)) /

No ans /

11. Should this material be available in the Library? //

Yes	1
No	2

12. How is this material used in relation to your course?

To write essay /

Integral 'stepping-stone' for an exploration of literature /

13. Other comments:

Signed .....(Your name will NOT be used in any information passed on to anyone else)

THANK YOU VERY MUCH FOR YOUR HELP

PLEASE RETURN THIS FORM TO THE LIBRARY ISSUE DESK
OR THE EDUCATIONAL SERVICES UNIT 3E

VCR

HARRIS

2H

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

Evaluation Form

Please complete a form for each set of material you use (study pack, tape-slide programme, television programme)

1. School: Elec Eng /

Viewing: class/group/individual /

Month and year of viewing:

Year/semester of group/individual: 4r /

Please circle the code corresponding to your answer, like this (2).

2. Title of material:

"The News" C156.

3. Where did you use the material?

Lecture Theatre (Room .....)	1
Library /	2
Elsewhere (specify)	3

4a. Did you find this material interesting?

/ Very interesting	1
Fairly interesting	2
Not very interesting	3
Not interesting at all	4
Don't know	5

4b. Which parts, if any, of this material did you think were boring?

No ans /

5a. How difficult did you find this material?

Very difficult	1
Difficult	2
/ Just right	3
Easy	4
Very easy	5
Don't know	6

5b. Which parts, if any, of this material did you find particularly difficult?

No ans /

6. What do you think were the main points the material was trying to put across?

Reports shown on news not necessarily important ones - dramatic effect plays large part / How an audience reacts can affect response of viewer /

7a. How clearly do you think this material put its main points over?

/ Very clearly	1
Fairly clearly	2
Not very clearly	3
Not clearly at all	4
Don't know	5

7b. Which parts of the material, if any, did you think could have been made clearer?

No ans /

8a. How useful did you find any printed handout for this programme?

Very useful	1
Fairly useful	2
Not very useful	3
Not useful at all	4
Not read	5
/ Not received	6

8b. either If you thought the printed handout was not useful, why was this?

No ans /

or Specify what printed handout would have been useful

No ans /

9. If this material were to be re-made, what changes do you think should be made?

No ans /

10. Are there any other comments you would like to make about this material?

No ans /

11. Should this material be available in the Library? /

Yes	1
No	2

12. How is this material used in relation to your course?

No ans /

13. Other comments:

Signed .....(Your name will NOT be used in any information passed on to anyone else)

THANK YOU VERY MUCH FOR YOUR HELP

PLEASE RETURN THIS FORM TO THE LIBRARY ISSUE DESK
OR THE EDUCATIONAL SERVICES UNIT 3E

2H01CS

Study Pack - Behavioural Objectives M. Ed. HARRIS

"gives you the idea ... in the form of criticism"
"extremely useful" "I like it"
"good for understanding - clear many doubts"
Not used materials before
"need a little more time for the references"
Borrowed study pack and photocopied contents
therefore had longer than normal study period.
Thought this necessary to read it all thoroughly.

2H04CS

Study Pack - Behavioural Objectives M.Ed. HARRIS

"useful in the sense that he puts together a few articles about the same thing, so don't have to go round the whole place hunting"
Time Friday O.N. + W/E.
Could not have coped with material in 4 hours
"too much to get through"
Access No difficulty "just available on Friday"
Not used packs before
How used Made notes "will probably use some of it to write an answer"
Material interesting? "helpful but not really interesting" 6/10/76

2H05CS

Study Pack - Behavioural Objectives M.Ed. HARRIS

"particularly useful because the relevant material is extracted from different sources, different books which ordinarily would consume a lot of students' time" They were all concentrated there"
"very, very useful" "time saving"
Time Came during vacation. "took study pack out quite a number of days" - extended loan period - 2 days.
"half a day is very short because there are some articles which are quite long"
4 hours .... "doesn't give time ... under pressure".
Made notes & also photocopied contents
"articles were all relevant to assignment"
Microfiche? "could be useful ... looks alright & handles easily"
"Library staff assistants, they are very kind, very helpful"

Study Pack 3 M.Ed. 2H08CS HARRIS

Just used - 'useful - would like more information on domain referenced measurements'.
Read, made notes and then précis - will use for assignment to write essay.
The beauty of the study packs is that they give references which can be looked up.

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

TO:

FROM: Dr. Duncan Harris, Mrs. Susan Kirkhope

Evaluation of Non-Book Material in the Library (2nd Report, 20th January, 1977)

(study packs, microfiche excluding catalogue, video cartridges, synchronised tape/slide etc.)

Introduction

The first report gave an outline of what we were doing, some information available from last year's use of study packs and data specific to your materials.

The questionnaires have been filled in by students without any coercion from their tutors or from us. In the case of study packs the questionnaires are in the packs and available at the Library issue desk. For the video cartridges and tape slide materials the questionnaires are in the appropriate room. The responses from study pack users compared with the number of uses of study packs is about 3.1%. It is not possible to determine the response rate for other media. However, if the video cartridges are taken as an example, only two video cartridges can be used simultaneously and the machines are not in constant use. It seems probable that there will have been considerably less use of the 250 video cartridges that the 700 study packs, and yet there have been more questionnaires returned relating to use of the video cartridges. A contributing factor may be that the study packs are frequently related to assignments or seminars and constitute a heavy work load in a limited period of time. This is discussed later.

It is clear that generalisations are at best tentative even if all the sample agreed on a particular response. The information has been categorised in areas determined primarily by student comments rather than the questionnaire basis.

Basis of Responses

Up to 10th December 1976: 124 questionnaires had been received and 57 interviews conducted. These sampled 18/70 lecturers' materials in study pack form, 11/26 in video cartridge form, 3/15 in tape slide form and 1 microfiche. The respondents included 40 post graduates, 7 4th year undergraduates, 21 3rd year undergraduates, 16 2nd year undergraduates and 70 1st year undergraduates, in the remaining cases students did not identify their year.

Source of Information and Browsing

Where students identified the source of their knowledge of the presence of the material in the Library these were:

from the Lecturer	31	(22 study packs, 9 video cartridges)
from other students	3	(3 video cartridges)
from Library staff	3	(2 study packs, 1 video cartridge)

In addition some students found materials by browsing:

"tape (video) *viewed for personal interest - a lot was learned"* (OU video recording)
"material was personal interest rather than course-orientated" (OU video recording)

"it would be very useful to students other than those doing Modern Languages .....who want to learn French for a placement or a job on holiday in France" (BBC schools broadcast)
"of general interest" (3 students)

One student felt that browsing of study packs would be useful.

Access to Materials

The commonest comment for study packs was the requirement for *"more copies of study packs"*. There appeared to be some concern about the difficulty in finding packs: *"packs need more organising - difficult to find packs"*. From our observation there is no consistent method of labelling packs. Some packs have two different titles and sometimes a number as well, this gives students three different ways of asking for a pack and presents problems for the Library staff in hunting for one amongst say 20, or even in some cases 60, for that Lecturer. A further complaint related to copies not returned on time *"reserved copy missing", out not returned"*. Two students commented on the poor quality of the photocopying (were the photocopies legal?).

For the video cartridges there were requests for a catalogue and a rudimentary one is available now. However, this has provided more problems: *"hard to find tapes", "it took 10 minutes to find the tape required"*. These problems relate to Open University recordings which are listed under the School of the lecturer requesting the recording, when the recording may be applicable to other disciplines too.

Students found some difficulty in access: *"had tried to use last week - both rooms occupied"*. There were two complaints about the quality of recording - both off air recordings.

Use of Study Packs in relation to course

Where responses were given, 36 students were required to read study packs in preparation for seminars (5 Schools, 13 lecturers covered) and 10 students had to prepare an assignment or an essay based on the study pack (2 Schools, 4 lecturers).

The type of comments from students on seminars were: *"presenting a seminar on Monday", "specific reading for a group discussion", "discussion for next lecture", "have to make notes followed by discussion groups", "must read before seminar next week; regarded as essential reading", "used for group learning", " the material was compulsory reading before a group discussion could take place", "as a primer: essential reading before a seminar", "it is a vital part of our course, being the basis of what we learn and discuss in our groups"*.

Student comments on assignments and essays:*"will read and make notes for an essay", "will use for assignment and write essay", "usually associated with an assignment", "particular interest for an essay I am doing", "material directly related to two essay titles and seminar"*.

Handouts were sometimes used in association with study packs:*"handout very useful, what was good was a) the summary b) the references so often omitted for study packs", "the handout wasn't an information handout, but suggested various ideas in the article that should be thought about"*.

Use of Video Cartridges in relation to course

The commonest responses were *"part of course", "as pre-lecture material", "aid to understanding theory", "clarification of lecture"*. In most cases it did not

appear that the material was as well integrated into the course as the study packs. However, some lecturers used other materials such as handouts or booklets in association with the video cartridges *"it helps very much to clarify the film", "notes very useful".*

It is also clear that some lecturers do not know or do not wish students to know about recordings available: *"used last year - found when doing work for another lecturer; not told by the lecturer".*

How Used

a) study packs

Very few students gave any evidence of being at all systematic or selective in reading and using the material: *"selected papers for week-end - 7 appropriate - take notes", "one section useful - notes".* Most students gave no information on selection save comments such as *"take notes - if several papers just flog through - no selection", "if too much to read either photocopy or borrow again", "thought necessary to read it all thoroughly".*

Students varied on their methods from *"read and made notes"* (10 responses) to *"just read, did not take notes"*(2 responses). There were some variations along this spectrum *"read, make notes and then precis - will use for assignment to write essay", "only read, write later (NOT notes)".* Several students incorporated comments on preferring to use over night or at weekends *"prefer to read it leisurely"*, whilst others photocopied as mentioned above.

b) Video Cartridges

Again a spectrum from *"run right through"* (8 responses) without notes to *"stopped when not able to understand, rewound, replay; make some notes"* (2 responses).

Work Pressure

Many students commented on the problems of using study packs effectively in the 4 hour loan period allowed during the day on the short term loan, *"short loan period not long enough"* (11 students). In some cases this was reversed to: *"the pack was too long to cope in 4 hours"* and one student suggested that each separate paper should constitute a separate study pack. One student was obviously well acquainted with the problems: *"came during vacation...extended loan period: 2 days,....4 hours doesn't give time and under pressure".*

Where Used (study packs)

Where the response was definite:

16 in the Library
8 at home
4 sometimes one, sometimes the other

Library Staff

All comments were complimentary *"helpful", "very helpful", "very kind".* One student suggested two irritations:

a) study packs are issued to students who have not reserved them when others have,
b) late returns need dealing with.

A final comment by one student, a plea from the heart:

"never abolish study packs".

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

TO:

FROM: Dr. Duncan Harris, Mrs. Susan Kirkhope

Evaluation of Non-book Material in the Library (Final Report 28th October, 1977)

(Study packs, video-cartridges, synchronised tape/slide, microfiche excluding catalogue).

Introduction

Two previous reports (dated 9th November 1976 and 20th January 1977) have been sent to lecturers with materials in these formats in the Library. If you have not received either of these reports there are a few copies left, please return the slip at the end of this report.

This report will be similar in format to the previous report with sections on

a) the use of study packs

b) the use of videocartridges

c) the use of other materials

d) costs of the two main formats (study packs and video cartridges).

e) possible mechanisms to continue the evaluation.

f) any particular information available on your own materials.

The Use of Study Packs

During the academic year 1976/7 there were a total of 1457 packs in the Library for at least some part of the year. The monthly distribution of uses is similar to that of last year, as is the pattern of uses at different times of the day. These distributions are shown in figures 1 and 2. In figure 3 the number of uses of packs is shown. Of the 886 packs in the first band (0-4) uses, 385 packs had no use at all during the year. A few of these were new packs put in for 1977/8, but a large proportion are unused. If you have packs in this category and they are unlikely to be used again it would help the Library staff if you asked for them to be removed. A further 200 packs had one use during the whole year, again is this an economic and essential use of the Library service? Why couldn't the one student have access to the original material?

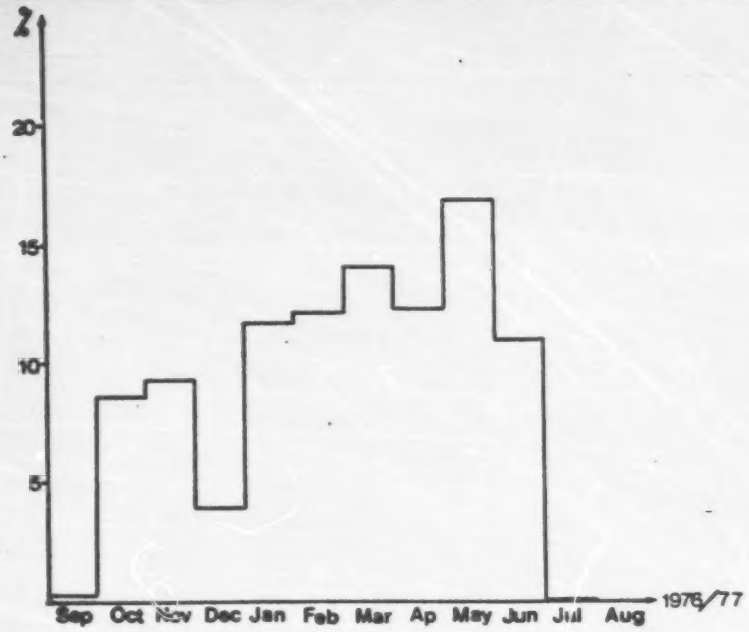


Figure 1: Uses of Study Packs during 1976/7

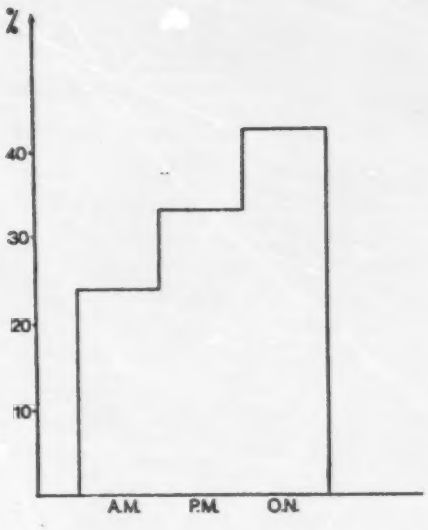


Figure 2: Distribution of Uses during the Day

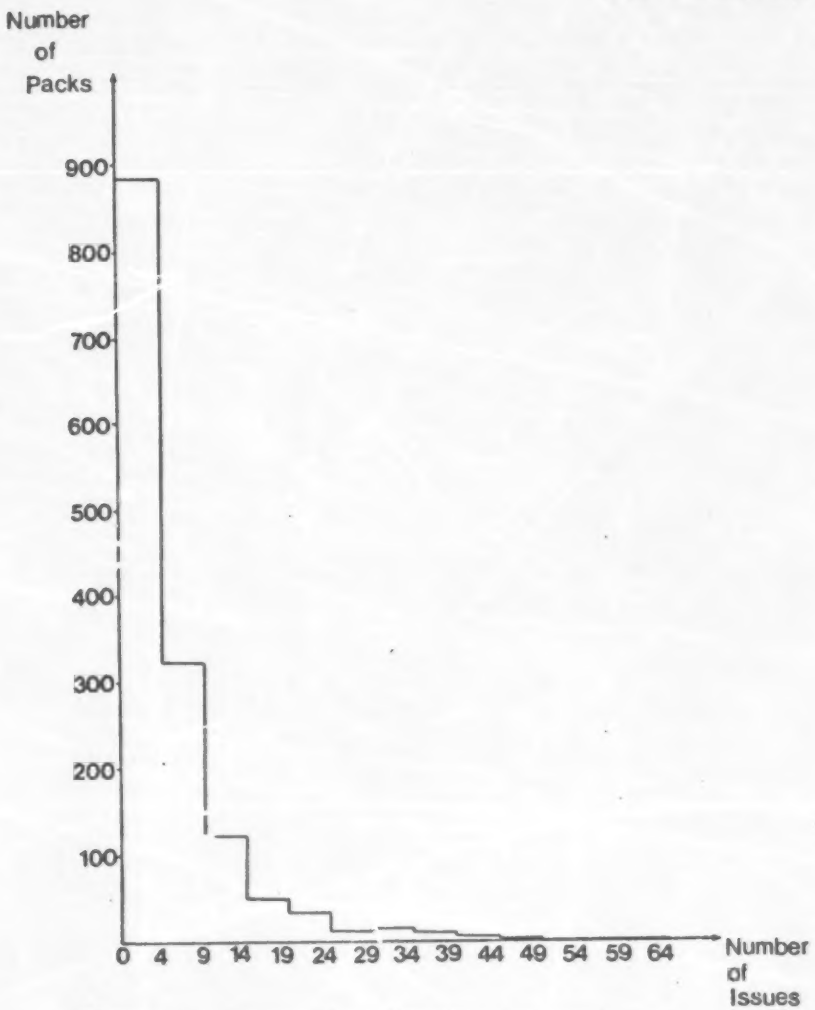
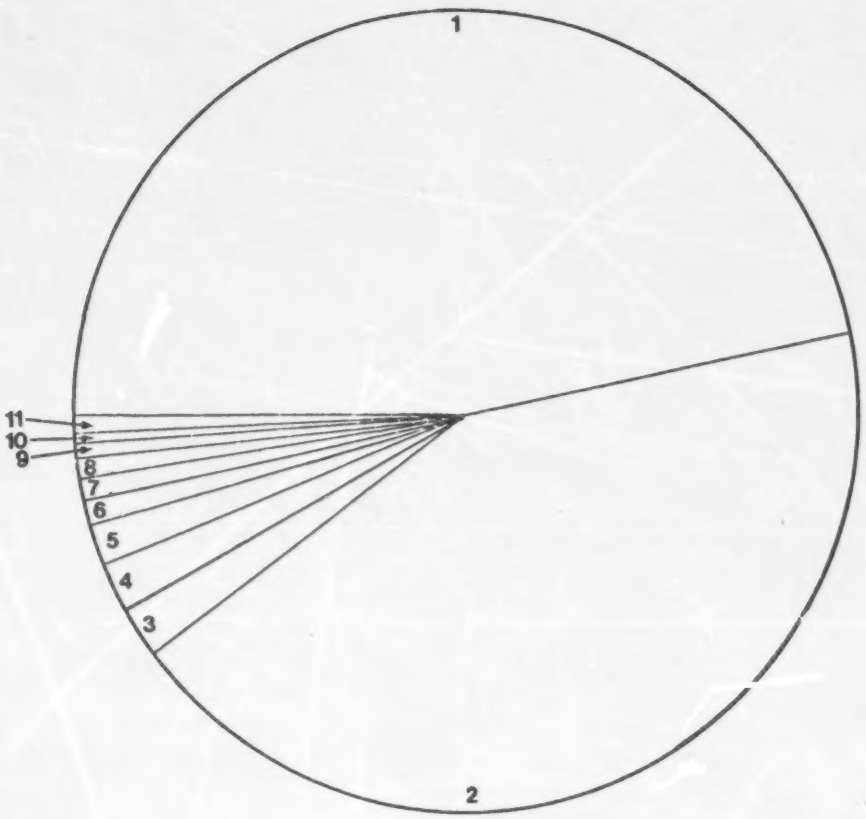


Figure 3: Issue Distribution for each Pack



		Number of Packs
1	Humanities and Social Sciences	680
2	Management	630
3	Pharmacy and Pharmacology	30
4	Education	30
5	Biological Sciences	24
6	Modern Languages	15
7	Electrical Engineering	13
8	Materials Science	12
9	Mathematics	8
10	Centre for European Industrial Studies	6
11	Physics	3
	Chemistry	2
	Engineering	2
	Chemical Engineering	1

Figure 4 : Distribution of Study Packs between the Schools of the University

	Architecture and Building Engineering	Biological Sciences	Chemical Engineering	Chemistry	Education	Electrical Engineering	Engineering	Humanities and Social Sciences	Management	Materials Science	Mathematics	Modern Languages	Pharmacy and Pharmacology	Physics	Other	TOTAL
Open University	47	15	-	-	3	17	7	15	27	-	-	-	-	-	2	133
Other University	-	-	-	-	-	12	-	-	-	-	15	-	1	-	-	28
Internal	-	1	-	-	-	9	1	1	-	-	1	-	3	-	4	20
Off-air (BBC/IBA)	-	-	-	-	8	-	-	-	10	-	-	5	-	-	-	23
TOTAL	47	16	-	-	11	38	8	16	37	-	16	5	4	-	6	204

Table 1 : Distribution of Videocartridges in the Library (by type and School)

Most students were very enthusiastic about study packs, in particular when the packs were associated with assignments, worksheets or seminars. A few students did query the method as "spoon-feeding". Considerable frustration occurred when papers were missing from a study pack, or there was no contents list or reading list associated with the pack. A contents list should be associated with a pack in order for students to ascertain that it contains the full complement of documents. If papers are missing a routine should be established of reporting the loss to the lecturer or the Library. The responsibility for the contents of the pack is with the lecturer. Another frequent criticism was that the packs are too long for the 4 hour short loan period. The distribution of packs between Schools is shown in Figure 4.

The Use of Videocartridges

It has not been possible to monitor the use of the videocartridges with the same accuracy as the study packs. Because the cartridges are on free access and not issued there is no simple monitoring mechanism. Two series of cartridges have had very heavy use. The videotape had deteriorated by the end of the year and was providing problems for other users. These two series were withdrawn, one being replaced by a new recording.

Over 250 videocartridges have been in the Library during the year. In August there were 204 still there. The distribution of the 204 amongst Schools is shown in Table 1.

Users of videocartridges should bear in mind the cost of this provision, most of which falls on the budget of the Educational Services Unit.

Students' reactions have been varied, from very enthusiastic to lukewarm. There is a big variation in the origin, standard of production and expected audience for videocartridges. The cartridges most heavily used are those which are specified within a course and/or which have printed materials associated with them. The main complaint is that students are not aware of the presence of the materials - in some cases the lecturer, who requested the inclusion of the cartridge in the Library,has failed to tell the students of it.

The Use of Synchronised Tape/Slide, Audio and Printed, Microfiche

The use of these materials has been on a much more limited scale. Again students have not been told that the materials exist, even when the lecturer has gone to the trouble of producing the material.

Very few students showed any enthusiasm for microfiche in spite of its obvious advantages for storage and replacement.

The Costs of the Two Main Formats (Study Packs and Videocartridges)

A detailed analysis of the costs has been carried out, details are available by ticking the appropriate box on the sheet attached.

Figures 5 and 6 show the costs/use in relation to the number of uses. These costs are based on 1977 figures and are calculated annually (ie. the costs will not decrease in a second year).

The range for study packs shows the maximum and minimum cost of assembling, cataloguing, issuing a pack. Most of the study packs in the Library are nearer to the minimum than the maximum. One factor to be borne in mind is that with each use there is a cumulative cost because of issuing study packs.

The range for videocartridges shows the variety of origins of material available in the Library. Generally internal productions are more expensive than external.

Possible Mechanisms for Continued Evaluation and Development

1. Lecturers can check number of uses and times of use of study packs from the date stamps on the card in their study pack.

2. The questionnaires used this year can be put in your pack and returned to you/the Library/the Educational Services Unit.

3. Your own questionnaires can be used.

4. The Educational Services Unit is prepared to carry out individual or group interviews of students using any materials. This would be at your request and a report of the interview would be passed to you and your students. This may form a basis for discussion on modifications for the next year.

5. How closely do students' assignments relate to the literature they have read in a study pack? A systematic analysis of the source material and the assignment could be carried out.

6. Can students be made to use videocartridges, tape/slide or other audio visual materials more actively? What sort of response do they make on associated tests or written assignments? If Open University material is used are the students recommended to read the associated OU text too?

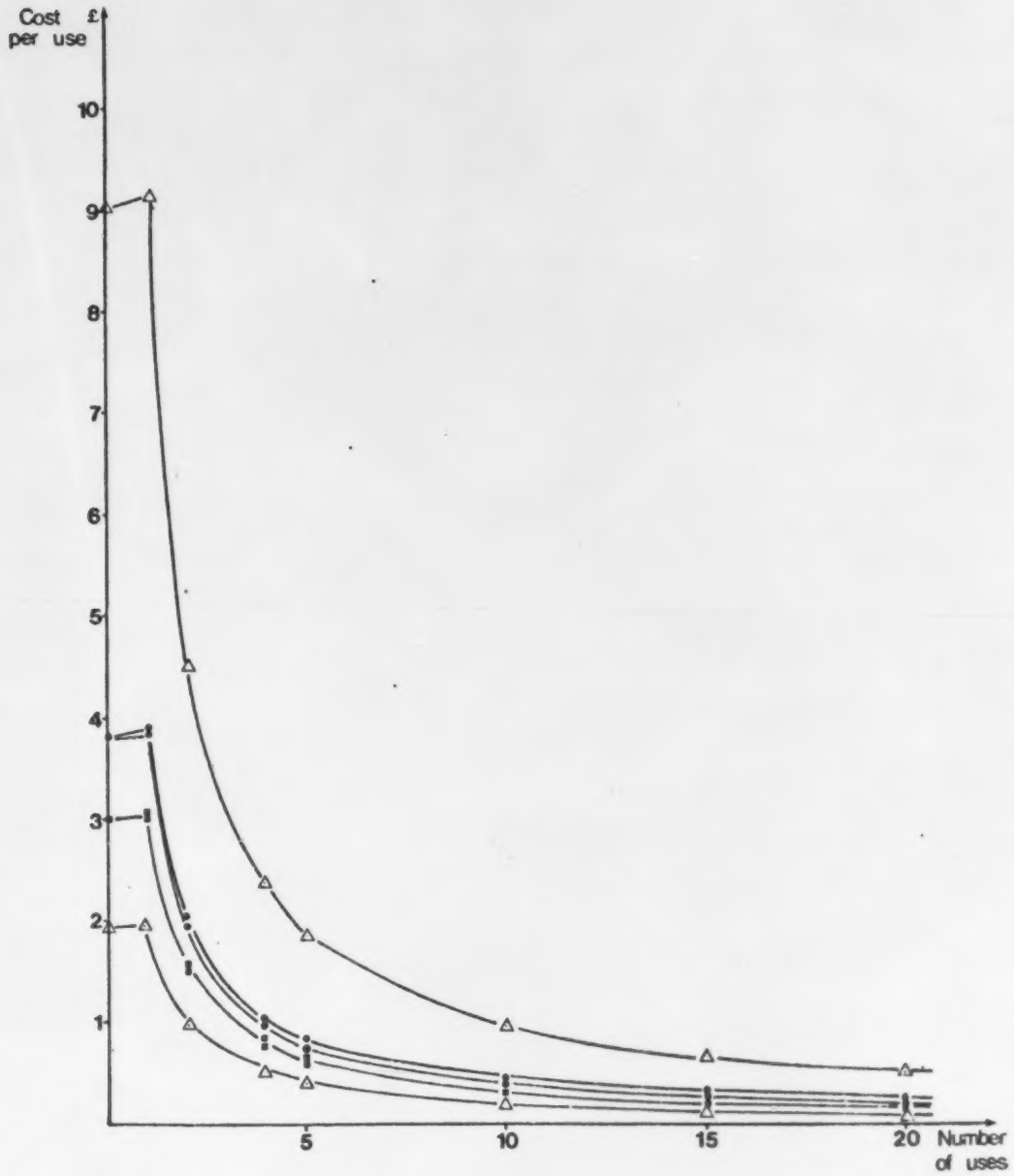


Figure 5: STUDY PACKS - Cost per use per pack (all types)

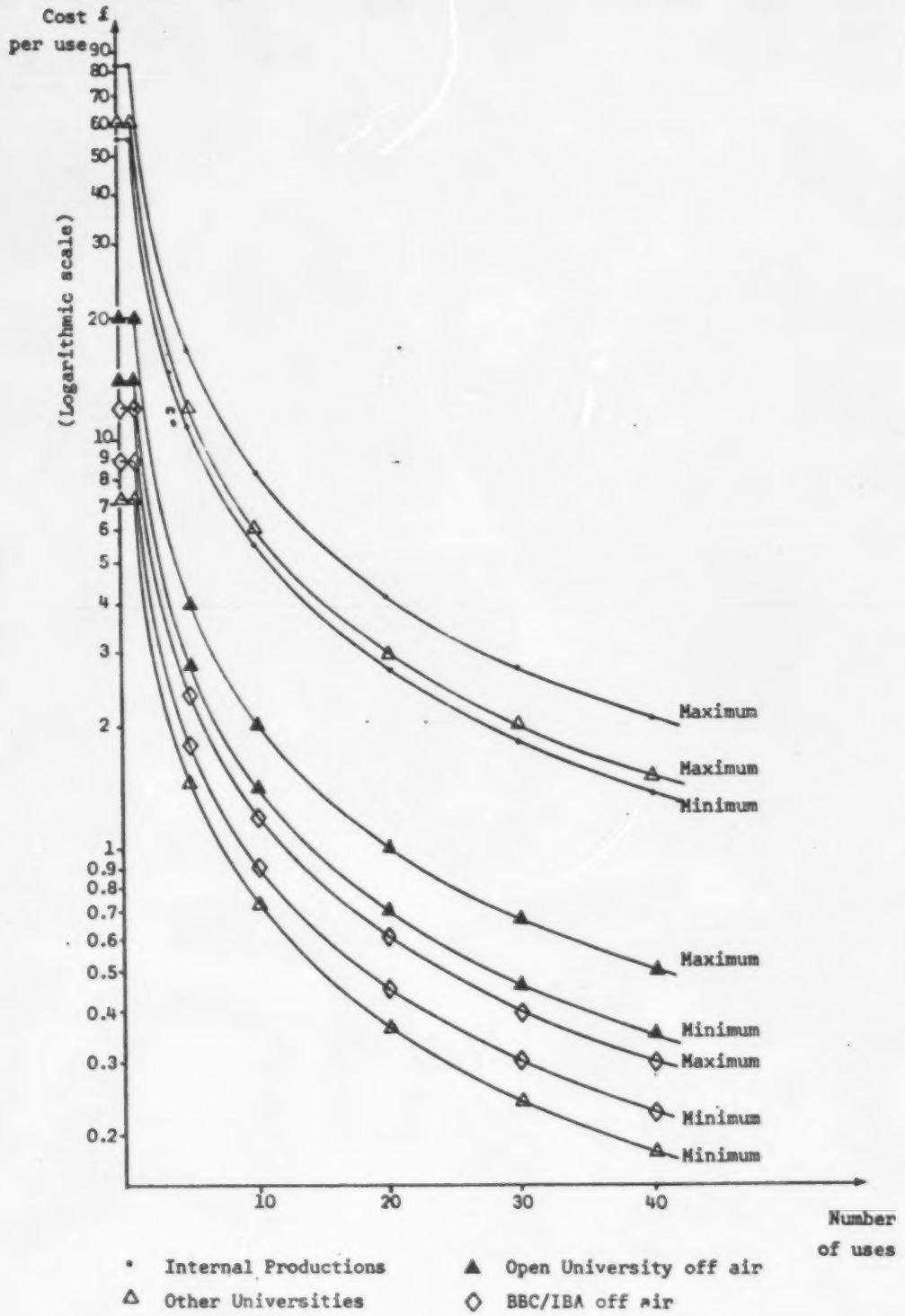


Figure 6: VIDEOCARTRIDGES - Cost per use (all types)

UNIVERSITY OF BATH

EDUCATIONAL SERVICES UNIT

TO: Mrs. Susan Kirkhope, 3E 2.10

FROM: ..... School ..... Ext. .....

Please send me a copy of each of the following:

	Tick those required
First report to lecturers (9/11/76)	☐
Second report to lecturers (20/1/77)	☐
Detailed reports:	
1. The Library Organisation and the Methods of Investigation.	☐
2. Distribution of Study Pack, Video cartridge, Tape/Slide and Micro fiche Use.	☐
3. Student Reactions to Study Packs and Videocartridges.	☐
4. Feedback to Lecturers and Library	☐
5. Cost Analysis.	☐
6. Conclusions and Recommendations.	☐
I would like the questionnaires to be put in my study packs for future use	☐
I would like a summary of my questionnaire responses to be made for me	☐
I would like to discuss the possibility of group/individual interviews of my students.	☐

UNIVERSITY OF BATH
EDUCATIONAL SERVICES UNIT

Susan Kirkhope

18th February, 1977

Report of Interview with 5 Students using a series of Study Packs

WHAT IS YOUR REACTION TO THE STUDY PACK SERIES?

"From a convenience point of view they are much better. References are given to us, and you can waste time looking for them in the Library if say, two Journals are not there, one is inexplicably missing and they only started taking another last year."

"In the fourth year time is very short and a study pack saves time."

"We know that the references in the pack are useful - we are told by the Lecturer."

"When we've done a subject in a lecture it saves him spending time giving us examples as the research examples are in the study pack. They are directly related to lectures and practicals."

"We are doing a crash course in a large subject so the study packs are very useful."

"I think they have a stimulatory effect. If we were given six references I wouldn't bother if they were in the Journals but I will read the study pack."

DID YOU USE ALL THE PACKS?

4 x "Yes"

"I am still reading through them."

HOW DO YOU USE THE PACKS?

"I read them and make notes. I read the review articles in depth but some only the conclusion and summary. You get to know which are the good papers."

3 x "Yes, you have to read them selectively."

"Some papers do not seem relevant to me so I leave those."

"It also depends on your interests. If it is a subject you are interested in you read the pack more thoroughly."

DO YOU USUALLY MAKE NOTES?

5 x "Yes"

"It is difficult to remember what you've read if you don't make notes."

WHERE DO YOU USE THE PACKS?

3 x "Mainly take them away."

"I mainly use them in the Library as I live quite a long way away."

"A mixture, sometimes at home sometimes in the Library."

HOW WOULD YOU FEEL ABOUT MICROFICHE STUDY PACKS?

"They would be more difficult to use and you would have to use them in the Library."

"Yes you would have to get a projector."

"I'm not keen, they wouldn't be so convenient."

"I sometimes photocopy sections of the study packs, and I couln't do that from a microfiche."

"Yes, I photocopy any useful diagrams or summaries."

HOW DO THE PACKS RELATE TO YOUR COURSE?

"They are back-up to the lectures and new work."

"The study packs are there if needed. They are back-up to the lectures."

"They give importance to the papers because they are in the packs. In previous years it was too much effort to get the Journals."

"Yes, the format of the study packs makes me more keen to use them."

ARE THERE ANY PARTS YOU FOUND IRRITATING OR ANNOYING?

"I thought some of the papers in them were irrelevant."

"We need more copies of the packs. It is annoying if you decide on the time to read them and then find someone else has them."

WHAT DO YOU DO THEN?

"Go and see who has the pack and either wait for it or share it."

"We are only a small group of about 12 on the course so you can keep track of the packs."

"If anyone is spending too much time with the pack, you go and find them."

HOW DO FEEL ABOUT THE SHORT LOAN PERIOD?

"It's too short because some of the packs are long."

"Some review articles can take a day."

WHAT DO YOU DO IF YOU NEED MORE TIME?

"Renew them, or try to have on Friday evening to get the weekend."

ARE THESE MATERIALS AT THE RIGHT TIME IN YOUR COURSE?

"I would have liked them earlier."

"Yes, from the beginning."

"No, we had classes of about 45 or 50 earlier in the course and they just wouldn't be practicable."

"We've only used them this year."

"I think it would be bad to start them too soon. You need to get the feel of the Library and reading Journals."

"I think you should have them in the 3rd year when we specialise."

"In the first year you only have light references and so can use the Library easily. In the 3rd and 4th years we get many

more references and they are very time consuming."

DO YOU FIND THE LIBRARY STAFF HELPFUL?

"The packs aren't in the Library. They've been in South Building since they were withdrawn at Christmas."

"I got the impression that people were refused them at the issue desk."

"We wanted them during the holidays so they were put in the South building and have stayed there."

"It's not always convenient, especially if there is no-one there to get the pack from."

"Usually you get them when we have been working in South Building and then bring them up to the Library to use."

"There is nowhere to use them in South Building."

"I would like somewhere in S.B. to use them."

WOULD YOU PREFER THEM TO BE IN THE LIBRARY?

"I would like two sets, one in the Library and one in South Building."

"If they are in the Library there is somewhere to use them, but you have the short loan period. In S.B. we can keep them out longer."

WERE THERE ANY OTHER MATERIALS SUCH AS HANDOUTS WITH THE PACKS?

"No just the study packs."

"We are just told of the references in lectures."

HOW DID YOU FIND OUT ABOUT THE MATERIALS?

"The lecturer cites the references. He says "... these can be found in the study pack on...."

"The first person to get the pack usually sorts out the articles and says which to read."

"Depends who it is whether you agree."

"Some people read them too thoroughly and others just skim through. In a group like ours you will get the whole spectrum of use."

"You have to read them selectively."

"Yes, it depends on your attitudes and interests how thoroughly you read them."

IS THIS THE FIRST TIME YOU HAVE USED STUDY PACKS?

2 x "Yes"

"We have a new set this term on different subjects."

"In previous years there were no packs relevant to us. These are the first ones done for us."

HOW MUCH DO YOU THINK YOU LEARN FROM THE STUDY PACKS?

"The lectures are a bit bare. The study packs add to the subject. We have to cover a large area and the illustrations are in the study pack."

"You learn more from the lecture as the basics are there. The study packs supplement the lecture."

"It clarifies the lecture. You do not learn masses more from reading the pack."

"All the information is in the lecture."

"If you miss something or he goes too fast you know you can go back to the pack."

WHAT DO THE PACKS CONTAIN?

"They are mainly Journal articles."

"Some are difficult to read. You get to be able to pick out the bad papers and don't bother to read these. They are not worth the effort."

"With a poor paper you get enough from the abstract."

WOULD YOU LIKE TO SEE ANY ALTERATIONS FOR NEXT YEAR?

"I think it is up to the lecturer to decide what he wants in the packs."

"I would like to see a grading system of relevant papers. Then if you're pushed for time you can read first the ones which are most important."

"In the review articles, if they are long ones, there could be lines in the margin at the points which are most relevant."

"As I said before, two sets would help us."

WOULD YOU LIKE STUDY PACKS FOR OTHER COURSES?

"I would like them for all coursesin the last two years when we are in small groups. Not for all the years with large numbers."

"I would like them for difficult subjects like biochemistry."

"No you can get everything you need from textbooks."

"I would like photocopies of sections of the books then. Some are not in the Library or are restricted. It would be useful for revision and accessibility."

"No"

WOULD YOU LIKE A CONTENTS LIST?

"Yes, it would be useful. In one practical pack there was a paper missing and I couldn't write up properly. It was in another pack."

"The packs often overlap, so a table of contents would help."

"You just hope the pack is complete. Interesting papers are added by the lecturer."

"He sometimes gives the actual reference and the pack so you know it should be there."

DO YOU FOLLOW UP ANY REFERENCES GIVEN IN THE PACKS?

"No, the packs are enough, I only use them."

"I have only followed up one or two."

"There is not enough time to do more."

"If a pack takes about a day or longer, you cannot spare more time."

"You read the pack more carefully if you think you may be examined on the subject."

"Yes, you read more carefully and make more notes. We have the exams in mind."

OCCASIONAL PUBLICATION NO. 3

AN EVALUATION OF THE USE OF SELF INSTRUCTIONAL MATERIALS IN THE LIBRARY

5. Cost Analysis

Educational Services Unit

University of Bath

5. COST ANALYSIS

5. 1. Introduction

The costings in this investigation are in relation to materials used in a Library for self instructional purposes by students. Although the cost per student hour is useful for comparison with conventional instruction, when dealing with self instructional materials it is not very realistic. For example a study pack may be issued to one student for one hour and to another for twelve hours. However, this does not mean that the pack is actively used for the entire period. A more realistic cost therefore, is the cost of providing the materials for the students from which a cost for each use can be calculated. This is the main method that will be used here.

5. 2. Main Elements taken into Account

Previous work has been carried out for costing of television materials. The University Grants Committee (1965) (1) included the costs of setting up a closed circuit television installation. In the case of the present investigation this is relatively easy because the cctv system was installed in a new building in 1975.

In order to determine some methods for costing six previous studies were considered. One of these (Pearson, 1977 (2)) looked primarily at the costing of Education, the remaining five related to television.

Trotter (1970) (3) develops a mathematical formula incorporating costs of:

i) production
   equipment (depreciated over 5 years)
   salaries of television staff
   part of salaries of academic staff

ii) replay

iii) overheads.

The costs of buildings and general costs (heating, lighting, cleaning,

local taxes) are not included.

Zeckhauser (1972) (4) gives little indication of his method of costing.

Layard (1973) (5) uses the following bases:

a) preparation costs of master copy
b) duplication costs
c) presentation costs.

No costs for buildings and general costs are included.

Spencer (1977) (6) uses bases similar to those of Trotter and Layard:

a) transmission
   i) machines
   ii) maintenance
b) production
   i) salaries
   ii) consumables
   iii) capital equipment
   iv) duplicates.

It is not clear what the difference is between machines and capital equipment or between consumables and duplicates. However the element of duplication is common with Layard.

Fielden and Pearson (1977) (7) in a short paper for a seminar run by the Council for Educational Technology suggested the following types of cost for educational technology:

a) direct professional staff
b) direct support staff
c) capital equipment
d) consumables
e) direct use of joint facilities
f) indirect recurrent costs
g) space.

Pearson (1977) is deriving costs of education in general and not specifically related to self instructional materials and media, although related to computer assisted learning. He divides costs into two main parts: current and capital; there is no depreciation factor incorporated for capital. The current costs are subdivided

under:

a) teachers' salaries
b) other salaries/wages
c) premises
d) books
e) equipment
f) other supplies and services
g) other expenditure.

It is clear that buildings and general costs are included here.

This study was part of an evaluation of self instructional materials (Harris and Kirkhope, 1977 (8)). The buildings and general costs have been specifically excluded primarily because students can use the study packs anywhere, so on the presentation/replay it is impossible to estimate an area of use as a basis for costs. For the videocartridges a figure could be deduced, but was beyond the scope of the present investigation.

One element which is not specifically included in previous studies has been included here. The shelving for storing the study packs and the furniture and shelving for the video replay rooms was tied down for this specified use. A furniture cost has been incorporated in the presentation/replay part. No cost for carrels or study area furniture has been included for study packs because all areas are on open access in the Library: the cost would be minimal when specifically related to study packs.

A comparison of all the elements is shown in Table 5.1. One other element used by Trotter, Zeckhauser, Layard and Spencer is a cost per student hour. It was made clear in the introduction that this was considered inappropriate in this context. However means of estimating costs per student hour from our figures will be shown.

Production costs will be calculated on the basis of work normally carried out in the University of Bath. Being a small University there are neither the staff nor the facilities for highly elaborate productions.

	Trotter	Zeckhauser	Layard	Spencer	Fielden & Pearson	Pearson	Harris & Kirkhope TV	Harris & Kirkhope SP
Production	✓	✓	✓	✓	-	N.A.	✓	✓
Equipment	✓	-	-	✓	✓	✓	✓	N.A.
Buildings and general costs	X	-	X	X	✓	✓	X	X
Salaries (academic and other staff)	✓	-	-	✓	✓	✓	✓	✓
Consumables	✓	-	-	✓	✓	✓	✓	✓
Replay/Presentation	✓	✓	✓	✓	-	N.A.	✓	✓
Equipment	✓	-	-	✓	✓	✓	✓	N.A.
Buildings and general costs	X	-	X	X	✓	✓	◇	◇
Salaries	✓	-	-	✓+	✓	✓	✓	✓
Consumables	✓	-	✓*	✓+	✓	✓	✓	✓
Furniture	-	-	-	-	-	-	✓	✓

✓ Included
X Excluded
N.A. Not applicable
- No information
* Duplication costs
+ Maintenance
◇ Furniture included
TV Videocartridges
SP Study Packs

Table 5.1. : Comparison of Data Included in Some Costing Exercises on Television and Education

The bases of costings used will be:

For Study Packs

1) Elements not included

a) overheads: buildings, heating, lighting, cleaning, rates (local taxes)

b) central university administration related to the Library (e.g. finance office)

2) Fixed elements to be distributed

a) shelving for study packs

b) folder for study pack

c) asssembly of packs

3) Variable elements

a) contents of pack

b) issue, booking, return, checking of packs

c) expected life

d) number of uses

The details of the derivation of the fixed costs are given in the Appendix.

For Television Materials

1) Elements not included

a) overheads: buildings, heating, lighting, cleaning, rates (local taxes)

b) central university administration related to television (e.g. finance office)

2) Fixed elements to be distributed

* a) television studio equipment

b) replay facilities in the Library

c) furnishing of replay rooms

d) servicing of equipment

* e) automatic recording equipment

3) Variable elements

* a) licences (IBA, Open University, television licence)
* b) recording charge by external institution
c) videocartridge
* d) production costs
e) checking and shelving of recordings
f) expected life
g) number of uses

* Not applicable in every case

Detailed information on the derivation of the figures for the various elements is given in the Appendix. Examples will be given in the text.

5. 3. Costs of Study Packs

Before considering the variable costs of study packs it is worth considering that the various kinds of study packs investigated were those containing

a) off-prints from journals
b) copies of small circulation journals, government papers, newspaper cuttings
c) xerox copies of material, which may be original material specifically produced for the study pack.

It should be clear that type (c) will be more expensive than type (a). The costs of all three types will be shown and then a range of costs derived with a median based on the data available. For all study packs the assumption is that the pack will remain basically unchanged for a maximum of three years. From observations during the year it is clear that some packs are altered every year, some less frequently and some not at all (i.e. they have been unchanged for up to 5 years in a few cases). However as the most expensive packs will be shown to be in type (c) and these are least likely to change over three years, any error in the estimate will occur within the range shown.

	Lecturers' time and postage £	Purchase & Filing cost £	Typing £	Copying & Labour £	Total per Year (including Fixed costs) £
(a) All off-prints	8.50	-	-	-	3.00
(b) Purchased material	8.00	3.00	-	-	3.83
(c) Own material typed (range for 4 sheets and 20 sheets A4)	4.00 - 20.00	-	1.00 - 5.00	0.32 - 1.60	1.94 - 9.03

Table 5.2. : Costs of assembling study packs

The study packs have an add-on cost for each issue. The times of issuing, checking, shelving, reservations have been derived from 177 observations timed with a stop watch. The maximum, minimum and median cost values are shown in Table 5.3 on the basis of £1.00 for each hour of work.

	Maximum (£)	Minimum (£)	Median (£)
Issuing	0.042	0.005	0.016
Checking	0.007	0.003	0.006
Reshelving	0.007	0.001	0.002
*1/10 Reservation/ Enquiry	0.005	0.0007	0.002
TOTAL	0.016	0.010	0.026

* From observation there was one reservation/enquiry to every 10 issues

Table 5.3. : Costs of issuing study packs (each use)

Looking at the cost of each issue (or use), the costs in Table 5.2. will rapidly decrease for a larger number of uses. However, the costs in Table 5.3. are an add-on cost for each use.

In Figure 5.1. the cost per use values are plotted against the number of uses of each pack to show the maximum and minimum value for all types of pack. The maximum figure is determined by taking the most expensive pack and the most expensive issue and the minimum is for the lowest cost all round. Other values can be interpolated using the starting figures in Table 5.2. A full derivation of the costs for all types of study pack can be found in the Appendix.

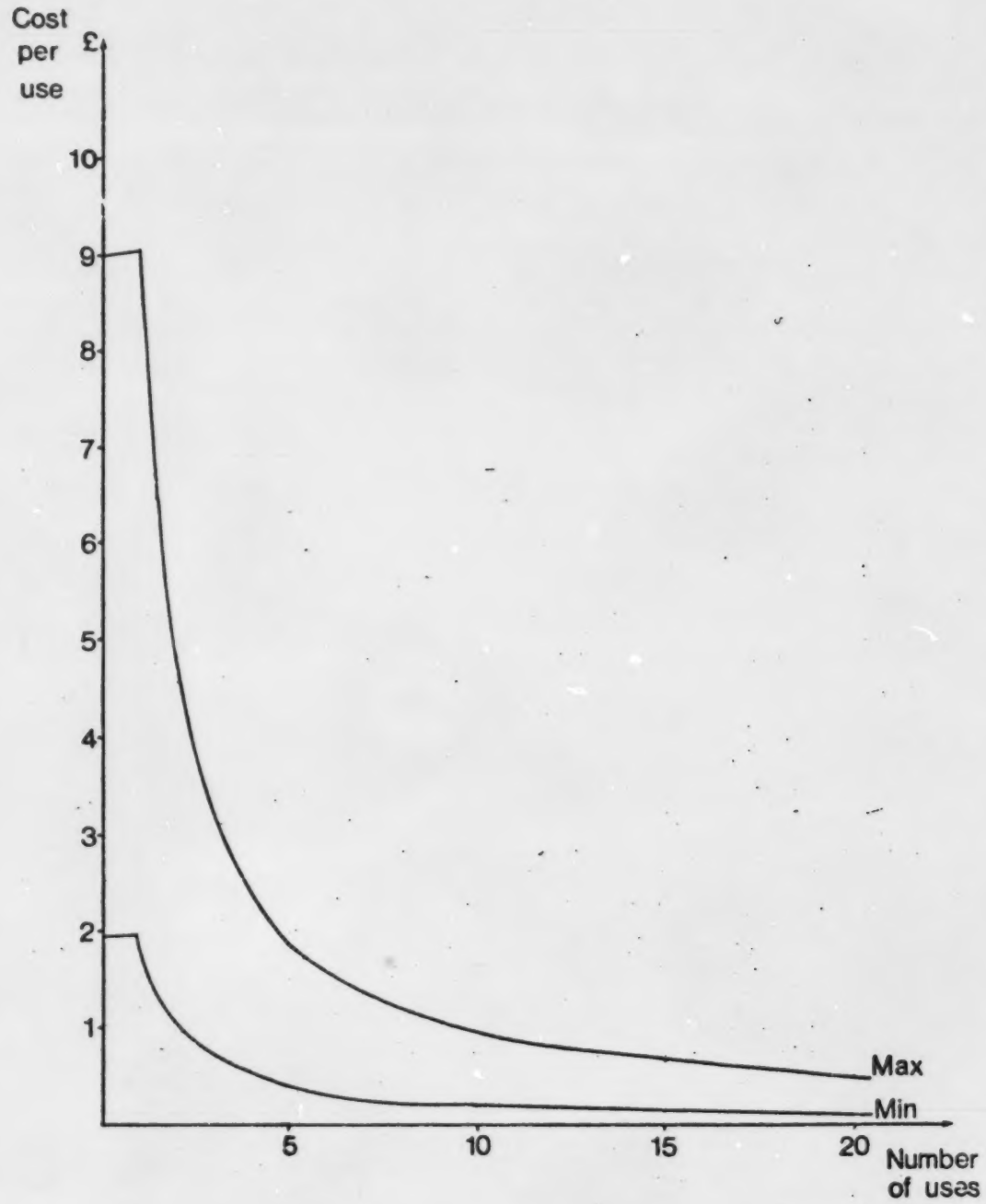


Figure 5.1. : STUDY PACKS - Cost per use per pack

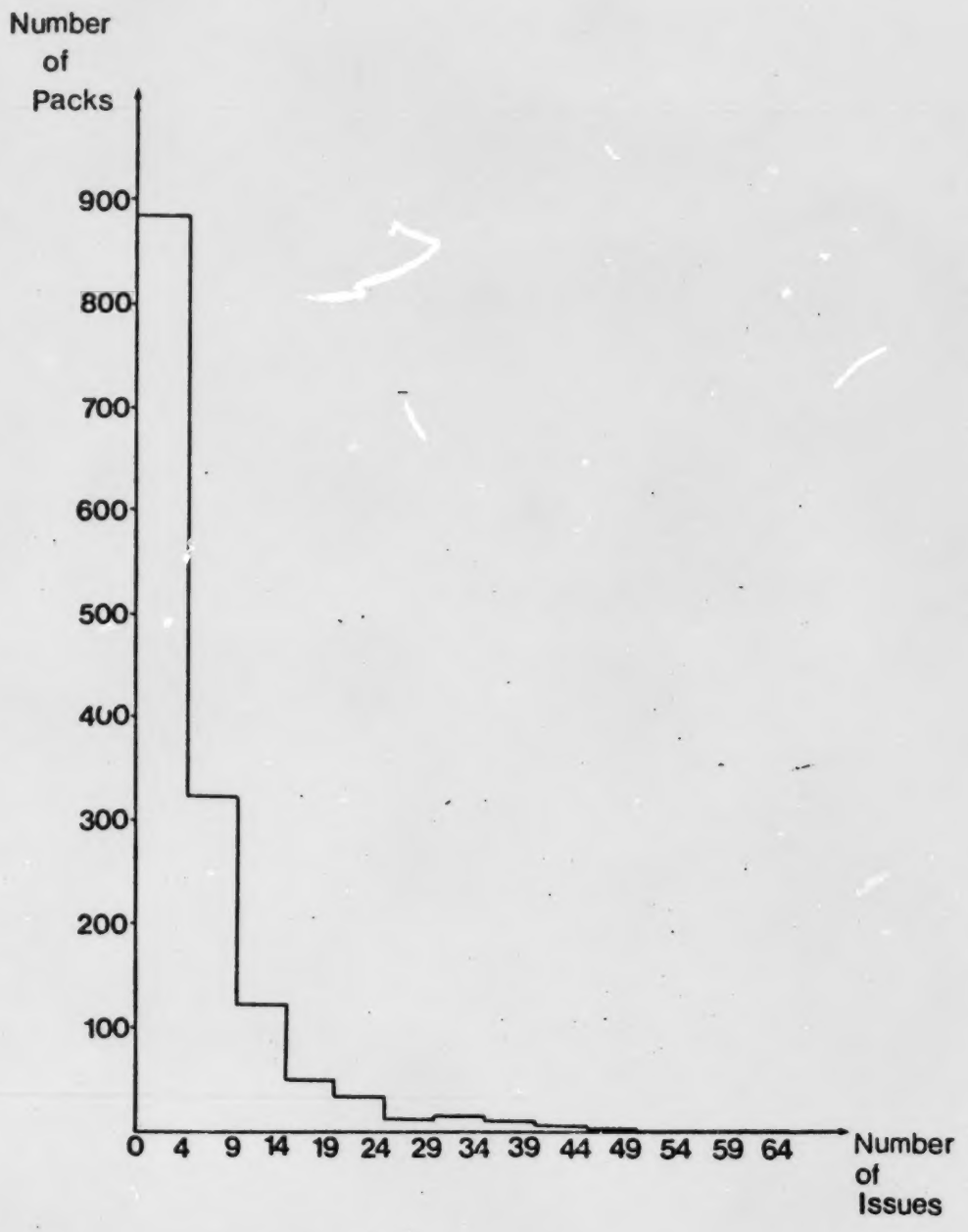


Figure 5.2. : STUDY PACKS - Issue Distribution 1976/77

During this investigation a total of 1457 different study packs were present in the Library. The issue distribution for these packs is shown in Figure 5.2., and this gives a calculated median issue value of 4.11.

However, of the 886 packs in the 0-4 range, 385 packs had zero use during the year. This figure includes new packs intended for future use, packs now removed from the Library and packs at present in the Library which have not been used during the current academic year. A value of 4 issues per pack will be used in calculations where a median issue rate is required.

This large figure for the zero issues has a considerable implication for the study pack system. These packs represent a sizeable capital outlay in their compilation and, although appearing to have no issue costs, the presence of such a large number of redundant packs on the shelves produces difficulties for the Library staff.

An estimate of the cost of the study pack system can be derived as outlined below.

The material investment is obtained from the fixed costs (see Appendix) x number of packs = £97.62

The staff investment is made up of three parts:

a) fixed staff costs (Library) x number of packs = £145.7

b) median issue cost x number of issues (7815 during 1976/77)
= £203.2

c) median compilation cost of packs x number of packs
From our data we cannot calculate this so a range will be given using the maximum and minimum values

Compilation costs = £2578.89 - £12894.45

The total cost is the sum of these parts giving the range:

£3000 - £13000 per year (to 2 sig. figs.)

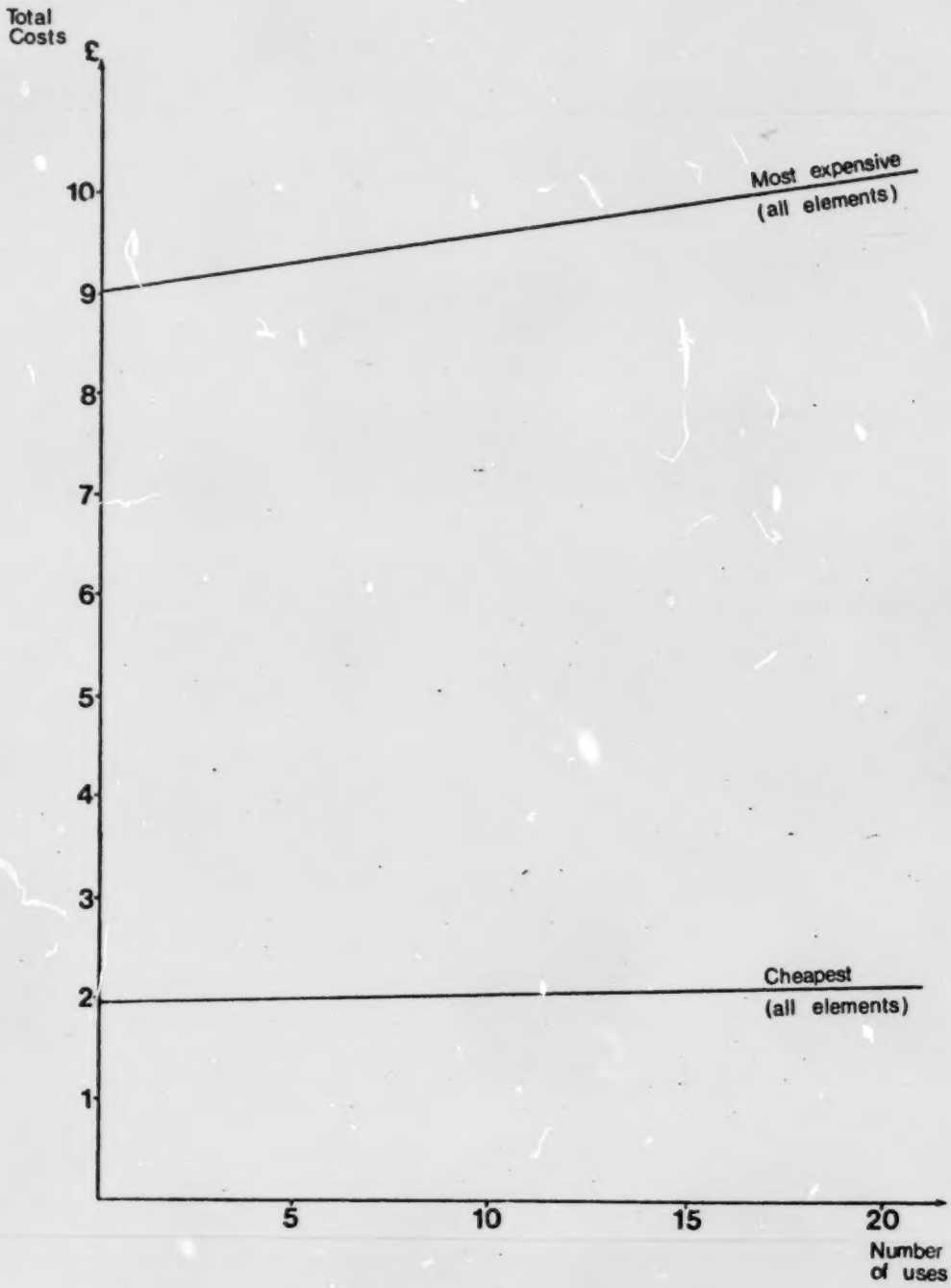
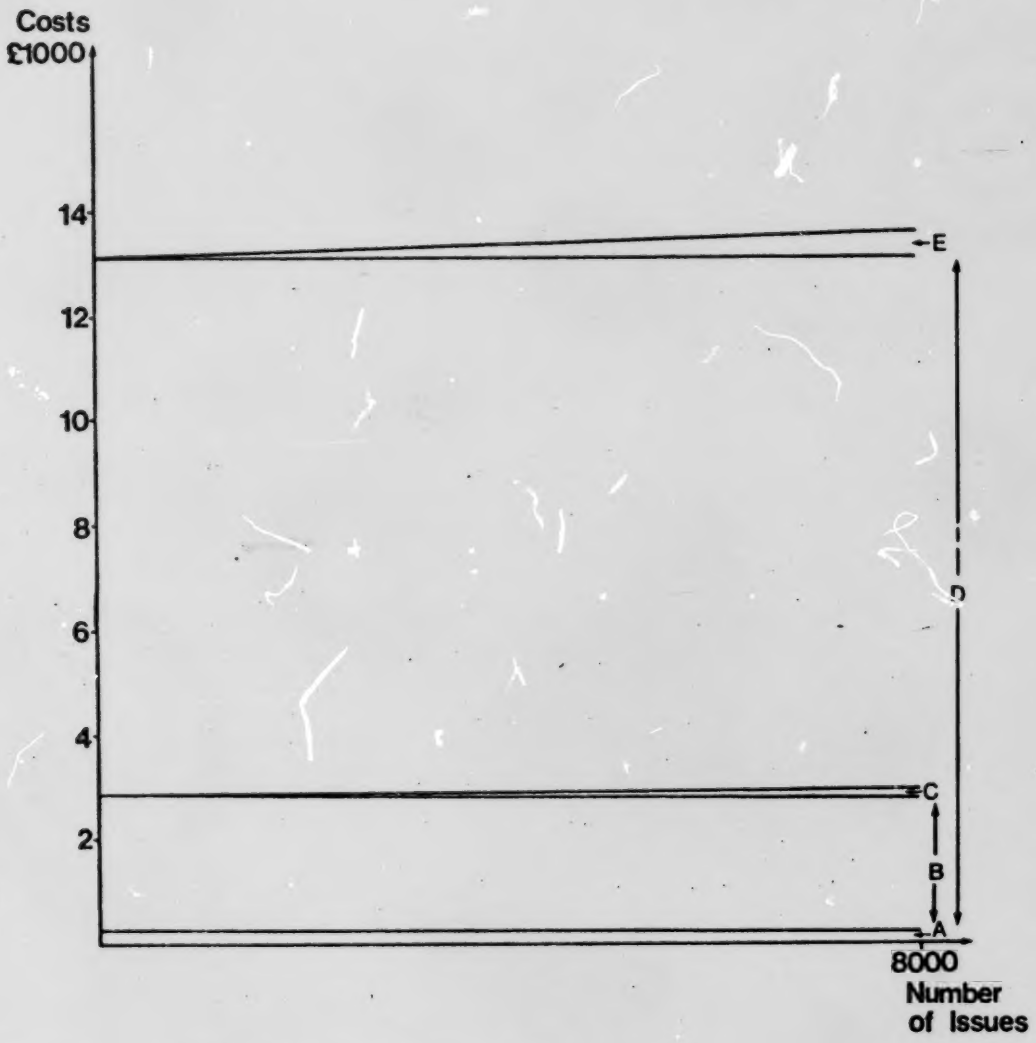


Figure 5.3. : STUDY PACKS - Total costs per year per pack



A Fixed equipment/Library costs

B Minimum compilation costs

C Minimum issue costs

D Maximum compilation costs

E Maximum issue costs

Figure 5.4. : STUDY PACKS - Total system costs

An alternative estimate can be obtained using the fixed costs and issue costs which have already been combined to derive Figure 5.1.

By using the range of values associated with the median number of uses (issues), the cost will be:

Number of packs x median number of issues x range of costs at median value

= £2884.86 - £13520.96

= £2900 - £14000 per year (to 2 sig. figs.)

Assuming the system is used by 3000 students, the cost per year per student is in the range £0.97 - £4.67

One factor worth emphasising for study packs is that with the present system a study pack's total cost increases with each use. The effect is shown in Figure 5.3. for individual packs and in Figure 5.4. for the whole system.

5. 4. Costs of Videocartridges

The variety of materials recorded on videocartridges includes

a) Schools and Further Education off-air recordings from BBC and IBA

b) off-air recordings from the Open University

c) recordings from other Universities

d) internal productions.

The cost of type (d) is the most expensive and type (a) the cheapest to the University. A range of costs will be shown for all four types. It will be assumed that off-air and Open University materials can be kept up to three years and that the life-time of an internal production will vary according to the elaboration of the initial production.

Table 5.4. shows the cost per year for each type of videocartridge.

	Licence £	Recording fee £	Production costs £	Library Facility £	Auto Recording £	Cartridge £	TOTAL £
BBC/IBA	0.10	-	-	4.4	1.67 - 5.00	•2.80	9.0 - 12
Open University	0.10	+4.83 - 7.50	-	4.4	1.67 - 5.00	•2.80	14 - 20
Other University	-	0 - 45	-	4.4	-	•2.80	7.2 - 60 ▽
Internal	-	-	*48.00 - 67.50	4.4	-	•2.80	55 - 83 ▽

* details of production costs are given in the Appendix

+ cost from Open University assumed £7.50 for first year of recording, £3.50 for second and third year

• cost of cartridge £14.00, assumed life of 5 years

▽ figure includes range of master videotape costs £0-8, (cost of videotape £40; assumed life of 5 years)

Table 5.4. : Annual costs of videocartridges (Total corrected to 2 significant figures)

	Architecture and Building Engineering	Biological Sciences	Chemical Engineering	Chemistry	Education	Electrical Engineering	Engineering	Humanities and Social Sciences	Management	Materials Science	Mathematics	Modern Languages	Pharmacy and Pharmacology	Physics	Other	TOTAL
Open University	47	15	-	-	3	17	7	15	27	-	-	-	-	-	2	133
Other University	-	-	-	-	-	12	-	-	-	-	15	-	1	-	-	28
Internal	-	1	-	-	-	9	1	1	-	-	1	-	3	-	4	20
Off-air (BBC/IBA)	-	-	-	-	8	-	-	-	10	-	-	5	-	-	-	23
TOTAL	47	16	-	-	11	38	8	16	37	-	16	5	4	-	6	204

Table 5.5. : Distribution of Videocartridges in the Library (by type and School)

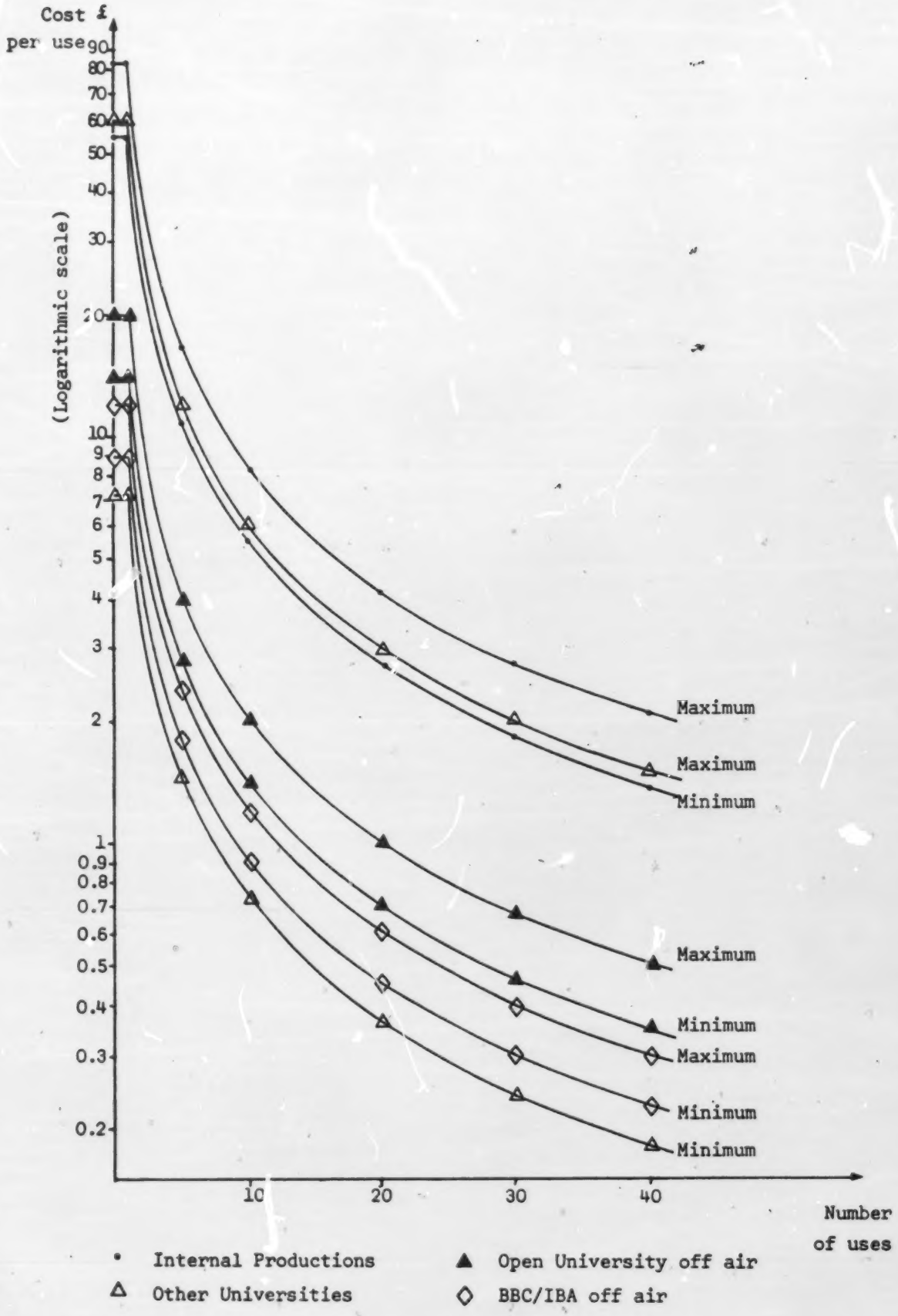


Figure 5.5. : VIDEOCARTRIDGES - Cost per use

The distribution of costs of the different types of video-cartridges according to the number of uses is shown in Figure 5.5. The cost for each use for the cheapest off-air comes down to about 20 pence for 40 uses each year, and for material purchased from another university at about £45 it comes down to about £1.50 for 40 uses each year. An internal production comes down to about £2.00 for 40 uses per year.

At the University of Bath the videocartridges in the Library are in the categories as shown in Table 5.5. The annual cost of providing the videocartridge system is shown in Table 5.6.

	Number	Material Investment (£) Equipment	Consumables & licence etc.	Staff Investment (£)	TOTAL (£)
BC/IBA	23	82 - 143	64	59 - 74	200 - 280
pen University	133	470 - 825	1014 - 1370	337 - 426	1800 - 2600
ther University	28	62	78 - 1562	62	200 - 1700
nternal	20	244	216	804 - 1194	1300 - 1700
OTAL	204	860 - 1300	1400 - 3200	1300 - 1800	3500 - 6300

otal costs corrected to 2 significant figures

able 5.6. : Annual costs of providing the videocartridge system (£)

5. 5. Derivation of Cost per Student Hour

a) Study Packs

The study packs are issued for periods of 4 hours during the day or overnight. Let us assume that for the latter 4 hours is the actual use too. Then from Figure 5.1. the cost per use at the median value of 4 issues is in the range £0.50 to £2.3 giving the range of costs per student hour as £0.12 to £0.56 (to 2 sig. figs.). This is roughly an order of magnitude cheaper than the booklet/tape cost given by Spencer (1977) and two orders of magnitude cheaper than videocartridges for the same number of uses.

b) Videocartridges

The videocartridges vary in duration from about 10 minutes to 35 minutes. Students do not necessarily only watch, although this is the main method of viewing (Harris and Kirkhope, 1977b)(9). Using the above viewing times, the range of costs can be derived from Figure 5.5., according to the number of uses. Giving three examples:

for 4 uses per year the range of costs per student hour is £3.1 - £120

for 10 uses per year £1.2 - £50

for 40 uses per year £0.31 - £12 (to 2 sig. figs.)

5. 6. Comments on Method Used

All the assumptions have been stated. No factors have been intentionally omitted and checks with previous work suggest that the figures derived independently are comparable. It is clear that when estimates and means or medians are used there is room for error. In order to allow for this error the composite maximum and composite minimum figures have been given where appropriate. It seems unlikely that with similar systems the figures will be outside these ranges.

There are, however one or two reservations. First considering the videocartridges: with an increased use of videocartridges (either with more students accessing the existing stock, or with

extra stock and extra students) it would be necessary to avoid queueing by purchasing a further play-back rig and setting up a further playback area. Suppose a further set-up were required now, this would change the basic cost per cartridge from £2.20 to £3.30. It is clear that step increases will occur which will reduce with further increases in loading. For the study packs the steps are smaller involving shelving and increased use of staff time, the latter ultimately leading to further appointments but well beyond the present scale of operation.

The high cost of internally produced material on videotape can be partially off set by aiming for external sales incorporating a profit margin. However at the costs shown a high charge and large sales would be necessary.

5. 7. Conclusion

It is clear that provision of these services involves a considerable investment of money in materials and staff. Although each individual pack or cartridge may not appear to be very expensive, nevertheless with a build up which is not monitored, the provision of self instructional materials in these formats uses precious resources at a surprising rate. This investigation was part of a wider investigation undertaken with the aid of a grant from the Nuffield Foundation. The other part was investigating student responses to the provision of self instructional materials (Harris and Kirkhope, 1977a). Future investigations will look at the learning using these materials, and only in this way can any answers be given to the question "Is it worth investing in these materials?".

5. 8. References

(1) UNIVERSITY GRANTS COMMITTEE (1965) Audio Visual Aids in Higher Scientific Education, London, H.M.S.O.

(2) PEARSON, P.K. (1977) Costs of Education in the United Kingdom, London, Council for Educational Technology in the United Kingdom.

(3) TROTTER, B. (1970) Television and Technology in University Teaching, Toronto, Committee on University Affairs and Committee of Preseidents of Universities of Ontario.

(4) ZECKHAUSER, S.H. (1972) A Look at Media in Higher Education, Programmed Learning and Educational Technology, 9,(6).

(5) LAYARD, R. (1973) The New Media and Higher Education, Minerva, XI, (2), 211-227.

(6) SPENCER, K. (1977) An Evaluation of the Cost-effectiveness of Audiotaped and Videotaped Self-study Media Presentations, British Journal of Educational Technology, 8, (1), 71-77.

(7) FIELDEN, J. and PEARSON, P.K. (1977) Cost Analysis Studies in Educational Technology: Outline of a Cost Analysis Methodology, in CET The Cost of Innovation (Programme for a Seminar, 12th July 1977) London, Council for Educational Technology in the United Kingdom.

(8) HARRIS, N.D.C. and KIRKHOPE, S. (1977a) An Evaluation of Self Instructional Materials in the Library:

1. The Library Organisation and the Methods of Investigation
2. Distribution of Study Pack, Videocartridge, Synchronised Tape Slide and Microfiche Use
3. Student Reactions to Study Packs and Videocartridges
4. Feedback to Lecturers and Library
6. Conclusions and Recommendations

Bath, University of Bath Educational Services Unit.

(9) HARRIS, N.D.C. and KIRKHOPE, S. (1977b) An Evaluation of the Use of Self Instructional Materials in the Library, in HILLS, P.J. and Aspects of Educational Technology XI, London, Kogan Page.

5. 9. Appendix A

Study Pack Costs

Fixed Elements:	£
Supports, 20 units of Shleving, 72 dividers, 14 vertical dividers, 54 labels and holders	500
Labour to assemble	40
2 sets of files for card index	10
Cost per year (10 year depreciation)	55
Cost per pack (distributed across 1500 packs)	0.037
Folder (15p, five year depreciation)	0.03
Time for Library staff to label and catalogue, ½ hour, distributed	0.10
Total Fixed Element per pack per year	0.167

Compilation of Study Packs:

(a) All off-prints	
Postage and Academic time (2 hours)	8.50
Cost per year (3 year depreciation)	2.83
Plus fixed element, total per pack per year	3.00

(b) Small circulation journals, government papers, newspaper cuttings	
Cost of purchased material	3.00
Academic time (2 hours)	8.00
Cost per year (3 year depreciation)	3.67
Plus fixed element, total per pack per year	3.83

(c) Own material copied	
(i) 4 sheets A4	
Academic time (1 hour)	4.00
Typing	1.00
Xerox and Labour	0.32
Cost per year (3 year depreciation)	1.77
Plus fixed element, total per pack per year	1.94

(ii) 20 sheets A4

Academic time (5 hours)	20.00
Typing	5.00
Xerox and Labour	1.60
Cost per year	8.85
Plus fixed element, cost per year per pack	9.03

Library Staff Costs

(from timings in the Library @ £1.00 per hour)

	Maximum cost (£)	Minimum cost (£)
Issue cost	0.042	0.005
Checking cost	0.007	0.003
Reshelving cost	0.007	0.0013
1/10 Reservation/Enquiry cost	0.005	0.0007
Total cost per issue	0.061	0.010

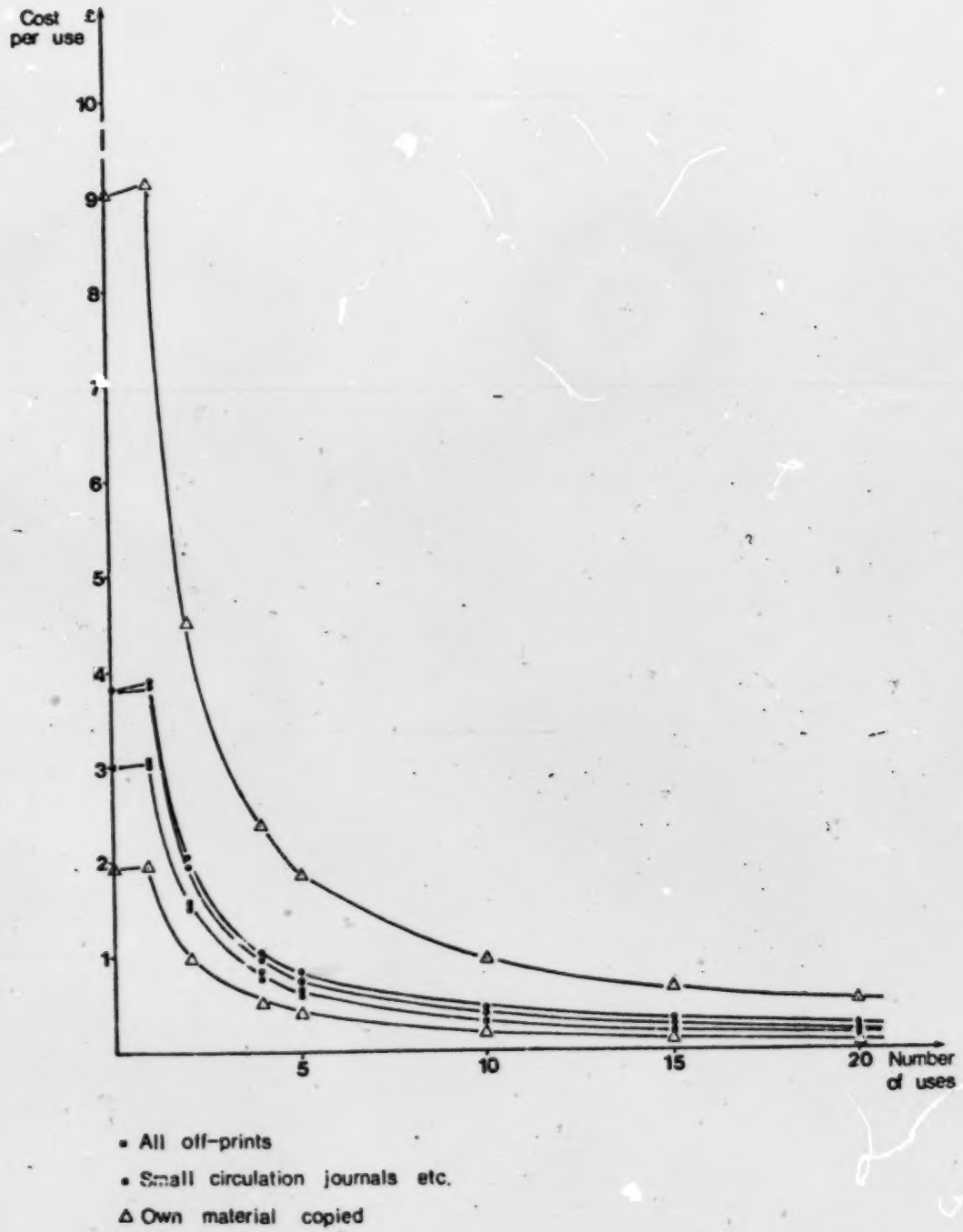


Figure 5.6.: STUDY PACKS - Cost per use per pack (all types)

5.10. Appendix B

Videocartridge Costs

Fixed Elements:

All equipment has been costed on a 20% depreciation for each of five years.

		£
a)	Equipment in Library (2 sets)	
	Video recorder, colour receiver, modulator, cabling,	2000
	Cost per year	400
	Furniture, shelving	400
	Cost per year (10 year depreciation)	40
	200 videocartridges, cost per year per cartridge	2.20
	Checking and cleaning cartridges, 120 hours @ £2 per hour	240
	Checking and Servicing equipment, 2 hours per week for 50 weeks	200
	Cost per year per cartridge	2.20
	Total Fixed Element per cartridge per year	4.40
b)	Automatic Recording Equipment (2 rigs)	
	Video recorders, colour receiver, clock operated switch, supports	400
	Distributed over (say) 100 off air recordings, Cost per recording	4.00
	Loading, checking, labelling, servicing equipment, say ½ hour for each recording	1.00
	Recording may be kept up to 3 years, Cost per year per recording	5.00 - 1.67
c)	Television Studio	
	Equipment costs per year	5000
	Average use of 20 hours per week for all types of use (1000 hours per year)	
	Cost per hour	5.00
	Maintenance of studio, 1 technician @ £4000 p.a.	
	Cost per hour	4.00
	Total studio costs per hour	9.00

Production costs:	£
(i) Simple production (say 4 hours in studio)	
Preparation time (4 hours)	
1 Academic (originator)(@ £4 per hour)	16.00
1 Production staff (@ £3 per hour)	12.00
Studio costs	
Studio (see (c))	36.00
1 Academic	16.00
2 Production staff (@ £2 per hour)	16.00
Total Costs	96.00
Assume a life of 2 years before modification,	
Cost per year	48.00
Master Videotape (life of say 5 years)	8.00
Cost per year	56.00
(ii) More complex production (say 8 hours in studio)	
Preparation time	
1 Academic (10 hours)	40.00
1 Production staff (@ £3 per hour)	30.00
4 Production staff (2 hours @ £2 per hour)	16.00
Studio costs	
Studio (see (c))	72.00
1 Academic (originator)	32.00
4 Production staff (@ £2 per hour)	64.00
1 Technician from academics' department (@ £2 per hour)	16.00
Total Costs	270.00
Assume a life of 4 years before modification,	
Cost per year	67.50
Master Videotape	8.00
Cost per year	75.50

OCCASIONAL PUBLICATION NO. 3

AN EVALUATION OF THE USE OF SELF INSTRUCTIONAL MATERIALS IN THE LIBRARY

6. Conclusions and Recommendations

Educational Services Unit

University of Bath

6. CONCLUSIONS AND RECOMMENDATIONS

This section will be divided into parts relating to a) the research proposed; b) research strategies; c) the system that was investigated; d) suggestions for further work.

6. 1. The Research Strategy

Because of the shortage of personnel for the project it was necessary to cut corners in elements of the strategy where a more sophisticated approach would have been desirable (Section 1). In the first place it was considered that not only should as much information be collected as possible, but also that the lecturers involved should be kept informed of the progress of the evaluation. The preparation of this communication material was inevitably at the expense of improving techniques. The detailed individual information was time consuming to copy and present, and with hindsight it might have been better to have limited the reports to general ones and put the onus on the lecturers to request detailed information.

The principal weaknesses related to the long questionnaire and the group interviews. The long questionnaires were a modified form of a questionnaire that had been in use for some time. In its previous use it had been completed by users of video cartridges and tape slides both in the Library and in the classroom. There was an irregularity in the length of the scales. It was not liked by non-scientists (too many scales) nor by scientists (not enough scales!). Because of the time pressure on the use of study packs it soon became clear that it was too long in appearance. Students thought the questionnaire would take a long time to fill in, so they left it in the pack. A colour system was used so that when a coloured questionnaire was received a new set of questionnaire forms was needed in the pack. Because it was necessary to print enough to put into the packs in October for the pilot project, it was too expensive to modify the questionnaire and reprint after the pilot project.

It is interesting to note that the response from media users was good (the purpose for which the questionnaire was originally designed).

After discussions with other investigators who had had similar problems, and particularly Dr. Nancy Fjallbrant of the Chalmers University at Malmo in Sweden, a short questionnaire and short interviews were used for the study packs. Whole days were covered by the research team and Mme. Guillaine Evesque, a visiting research assistant from L'ENNA in Lyon. Through this saturation technique a much better sampling occurred, but at the expense of considerable effort. The timing of issues, bookings and replacements was carried out simultaneously. At the peak times of 1000-1100, 1300-1430 and 1600-1800 it was necessary to have two people present to check every user.

Through using this method it was necessary to abandon two other techniques that we had hoped to use more extensively:

a) group interviews (only two were carried out)
b) responses from non-users on a free response sheet (only one group was used).

Both these techniques were heavy on time for organisation and reminders. They were dependent on the goodwill and interest of the lecturer involved. Whilst using all the available time to catch willing users in the Library it was not possible to pester unwilling non-users out of the Library. How did these non-users answer their assignments, write their essays or prepare their seminar papers? It was a question that we were unable to answer.

One part of the observation was to watch users with the materials. This technique was fine for the videocartridges, but impossible for study packs. Most of the information we collected by this form of observation also occurred in interviews or on the questionnaires. However without the observation we would not have known several of the questions that were

asked to videocartridge users.

For the individual interviews we had a series of questions to which we hoped to get answers. However, the interview was opened on general lines, for example "What was your reaction to .....". Unless a student was very reticent, the questions were only used where they related to the previous answer. If a few questions did not fit into the sequence of the interview they were omitted. The lists of questions are shown in Appendix A.

The problem with using open questions of the type used in all our methods is classifying the answers. The size of the project did not warrant any computer analysis, so manual methods were used. Each response was identified by lecturer (e.g. 2H = Harris), number for the student responding, the type of method and the format of the material, e.g.

2H	04	Q	V
Lecturer	Student	Long Questionnaire	Video cartridge

(For more details see Report 1).

For the individual interviews the answers were taken long hand and later transferred to cards. For the group interviews these were recorded and transcribed verbatim.

After 100 responses had been obtained an attempt was made to derive some key words.

The keywords are shown in Table 6. 1.

Access	Undergraduate 3
Assignment	Undergraduate 4
Browsers	Use - how
Copies	Where
Other	Work pressure
Other materials	Library staff
Postgraduate	
Source: Lecturer, Student, Library staff, Catalogue, Other	Later Additions
Undergraduate 1	Comments
Undergraduate 2	NOT microfiche
	Library
	Revision/Exams
	Splitting of pack/pack too long

Table 6. 1 Keywords

The additions were extra keywords added after the original list. Each response was added to the keyword card where it was relevant. The keywords are worth comparing with the lists shown in Table 6. 2 (which are taken from Tables 3. 1 and 3. 2).

Those that were not in the keywords are underlined. It can be seen that the keywords were very useful for formulating the reports. Even if no further analysis had taken place, the losses would not have been great.

The responses to the short questionnaires are shown in Table 6. 3. The comments are added as each occurs. There were 136 short questionnaire responses. These produced the longest list of responses (45 variations cp 34 from interviews and 34 from the long questionnaire).

Study Pack

1. Use for essay
2. Inadequate loan period
3. Use with lecture course
4. Pack too long
5. For seminar/discussion
6. Book shortage
7. Use for revision/exam
8. Own room overnight
9. More copies
10. Papers missing
11. Pack not there when required
12. No microfiche
13. Use in Library
14. Crystallise issues
15. Take notes
16. Essential reading
17. Index of articles
18. Information not in books
19. Library helpful

Videocartridge

1. Browsing/interest
2. Use handouts/notes
3. Need for catalogue
4. No notes available
5. Lecturers/Schools tell us
6. Relates to lectures
7. Relates to course
8. Specific request for change
9. Simple to operate
10. Run straight through
11. Up date

Improve quality
Running noise
Improve sound
Replay/rewind used.

(Underlined not in keywords)

Table 6. 2 Main response from Tables 3. 1 and 3. 2

Student comments	No. of responses	Student comments	No. of responses
Use for essay	24	Introduction to course	3
Inadequate loan period	19	Need better quality	3
Length of pack (too long)	16	Plan when do work in own time	3
More duplicates/ copies	13	Saves sorting through books	3
Crystallise issues	10	Basis for further study	2
Paper(s) missing	10	Shorter than books	2
(Cover) book shortage	10	More/expand	2
Useful for exams/ revision	9	Several copies - easy access	2
Pack not there when reserved	8	Instead of lectures	2
Use with lecture course	7	Saves money - no need to buy books	2
Information not in books	7	Needs more recent material	1
Information/books not in Library	5	Laziness to look up original	1
Very important/study pack vital	5	For dissertation	1
Use for group discussions seminar	5	Showed varying opinions	1
Time saving	4	Books unobtainable	1
More up to date (than books)	4	Photocopy both sides - less thick	1
Get returned - Library (fines)	4	Too much redundant material	1
Material lecturer thinks important	4	Not as end in itself	1
Poor stacking/titling	4	Literature always available	1
Easy to get (short term loan)	3	Living off campus - return problem	1
No superfluous reading	3	Not lecture subject	1
		Little used	1
		For information	1
		Renew papers (worn)	1

Table 6. 3 Responses on Short Questionnaire showing number of responses to each element.

If a system shows saturation the number of elements showing a big response rate would be large and those with a small response rate small. One way of showing this is to find the percentage of elements with only one response. For the three collecting methods the figures are shown in Table 6. 4.

Long Questionnaire	Interview	Short Questionnaire
(N = 117) 34 elements	(N = 45) 34 elements	(N = 136) 45 elements
41% (14 elements)	41% (14 elements)	31% (14 elements)

Table 6. 4 Percentage of elements with a single response

The short questionnaire, with a larger number of elements would be expected to show a larger proportion of elements with a single response. Why the saturation effect should show for the short questionnaire is quite unclear, nor is it clear why there should be 14 elements in each collecting method showing a single response and equal numbers of elements for the long questionnaire and the interview overall! It is clear that for a proper comparison considerably more interviews would be necessary.

In many ways the element with which we were least satisfied was the cost analysis. There are a large number of assumptions which we have tried to make clear. The only consolation is that other recent work seems to make as many and often very many more sweeping assumptions. We were unable to give an accurate cost of the investments because we had inadequate data of the number of materials in each format which fell into our categories of expenses. At first sight it would appear that this would be easier for video

cartridges where the data was more complete. However, for Open University, IBA and BBC materials it is not clear how long they are to be kept until they are in their last year!

With hindsight it might have been advisable to reduce the data fed to lecturers and to have attempted to increase the information from groups of students. From this some data might have been available on non-users.

6. 3 The System

Study Packs

The main criticisms of the present study pack system were (rank order shown as in Table 6. 2):

Rank Order	Element
2	Inadequate loan period
4	Pack too long
9	More copies
10	Papers missing
11	Pack not there when required
17	Need for index of articles/content

2, 4, 9 and 11 are one basic problem. In our opinion one of the main causes of the problem is that students are unwilling to be selective in their reading. Only seven students from all those interviewed (50 students) showed any attempt to look at each paper in the study pack, read the introduction and conclusion (or abstract and summary) and select those which were worth reading in detail. The vast majority of students worked their way through each paper in detail. Some study packs may contain too much material, but many about which students complained did not appear to be excessively lengthy.

The possible solutions to this are:

a) subdivide all packs which are large (say more than 100 pages)
b) make each paper a separate "pack" (as at Nottingham University)
c) give students some advice on how to use such resources.

10 and 17 again appear to be one problem. Students were often quite angry when a paper was missing and the occurrence was frequent. With a contents list it is possible to at least check whether anything is missing.

The possible solutions to this are:

a) make each paper a separate pack
b) fix all papers together with some form of "binding"
c) put a contents list in each pack

The number of packs which have no use or one or two uses appear to be an expensive luxury. If there are only one or two users it would be less expensive to have the original material on the normal library shelves. There will be no problem of access with so few users.

Possible solutions are:

a) Library checks on uses at the end of each year, all packs returned to originator when there are 0-2 uses.
b) make all pack titles available in the catalogue to enable students to locate the material. The titles in KWOC (Key words out of context) would be most useful.
c) return all packs to originators during the summer vacation for i) checking number of uses ii) checking the contents.

d) require all originators to make regular checks as in c) with some recording system to enable unchecked packs to be removed.

e) require the originator to get his students to carry out the checks as in c) with a recording process as in d).

f) make it known to originators that the responsibility for checking study packs is theirs.

g) study packs checked by the Library staff at regular intervals for contents and uses, details of uses sent to originators with request for removal of 0-2 uses.

All the solutions except d), e) and f) have cost implications: the study pack system would become more expensive. d) and e) are likely to meet resistance and not be carried out by some originators. The follow up would have cost implications and may sour relations between Library staff, students and academic staff. f) is a less painful alternative. However, this was incorporated in the second feedback to lecturers (see Section 4), but with very little result. A regular reminder to originators is needed.

The cost of the study pack system is not very large. A reduction could be brought about by removing the packs with less use. Not only would this reduce the search time by Library staff, but also discourage the introduction of packs which are unlikely to have much use. Any improvement in the binding or covers would considerably increase the cost. We feel that for transitory material of this nature there is little point in improving the presentation.

Within the limits of the time and effort that can (or perhaps should) be put into the issue system, the system functions remarkably well. During our observations we found wide variations in the time taken by Library assistants (see Section 5). However, the faster issue times often related to an issue where no check was made to see if there was a reservation.

Videocartridges

The main criticisms of the present videocartridge system were (rank order shown as in Table 3. 2)

3 Need for catalogue/catalogue improvement
4 No notes available
5 Lectures/School please tell us
8 Specific request for production change
11 Up date
Improve quality
Running noise
Improve sound

The pattern here is less obvious than for the study packs, although 8 and all of 11 relate to improvement in the quality or content of the material.

The videocartridges are numbered in acquisition sequence. A title strip is placed on each box and on each cartridge. The numbers are confusing to the user because a series of ten cartridges may have a number sequence (in order of the programmes):

C10 C321 C45 C125 C126 C124 etc.

The available catalogue was a printed list of cartridges under the School of origin. In some cases these materials might be much more useful to students from another School who could only find them by searching the list or browsing along the shelves (see photograph in Section 1). The catalogue was not flexible enough to cope with the continual recordings of off air programmes and the removal of obsolete recordings.

Possible solutions are:

a) use a different numbering system to indicate the discipline of the originator or the content
b) have a card index of available cartridges with title, originator and discipline lists of numbers.

c) use some accession system for adding and removing cartridges.

The comment "no notes available": in some cases notes were available, but students had not been informed. The Open University texts associated with other programmes, were often in the appropriate section of the Library. The problem is that students were not aware that these were available. In other cases there were no notes. Students seemed keen to have summaries and in particular mathematical equations when they occurred.

The "Lecturers/School please tell us" does have some relation to the previous comment. It was clear that not only did lecturers not tell students about programmes that were not their own, but in some cases students were not told by the lecturer who had requested the material to be placed in the Library.

Possible solutions are:

a) make lists of all materials suitable for each discipline, circulate to Schools requesting the information is made available to students
b) request all lecturers with material to provide students with a printed short resumé or to refer students to the related material where it is in the Library.
c) make the information available about associated printed material on the index proposed in an earlier section.

Unfortunately all these have some cost implication. The least difficult would be a) and b).

Production and replay problems are associated with the remainder of the list. Whilst cheaper video recorders are used with open unsupervised access by students, it is inevitable

that there will be breakdowns from time to time.

Some of the "improve quality" and "improve sound" were associated with need for slight adjustments to the equipment. Others were associated with taking off air recordings with automatic equipment. Two series of recordings provided problems because the videocartridges had been so heavily used that the videotape was physically deteriorating. The production criticisms and suggestions for alteration related to the following factors: updating information, presenter's monotonous voice, poor editing. Ironically, all the comments were related to materials recorded off air or purchased from other institutions where there is little control.

Possible solutions:

a) regular checking of heavily used videocartridges for deterioration
b) replace playback machines more regularly with new ones (the present machines are 2 and 4 years old)
c) improve the quality of recorder and automatic switching used
d) increase technical staff in order to make a technician easily accessible

All these have labour and equipment cost implications. Only a) is feasible within present resources. The machines are regularly checked and have functioned very reliably in their early life.

The videocartridges are expensive and under used.

However, without supervision only limited information is available about which cartridges are used and how often. With improved communication more use would occur, but this may provide queueing problems.

6. 4 General Conclusions and Proposals for Further Work

One of the proposals we had hoped to make was a self-running evaluation system. The questionnaire used can be maintained in use. The processing would have to be primarily by the lecturers. The questionnaires are more suitable for the videocartridges than the study packs. A modified short questionnaire (see Section 1) may be more suitable for the study packs. The proposals made to lecturers are in Section 4, final report

1. Lecturers can check number of uses and times of use of study packs from the date stamps on the card in their study pack.
2. The questionnaires used this year can be put in your pack and returned to you/the Library/the Educational Services Unit.
3. Your own questionnaires can be used.
4. The Educational Services Unit is prepared to carry out individual or group interviews of students using any materials. This would be at your request and a report of the interview would be passed to you and your students. This may form a basis for discussion on modifications for the next year.
5. How closely do students' assignments relate to the literature they have read in a study pack? A systematic analysis of the source material and the assignment could be carried out.
6. Can students be made to use videocartridges, tape/slide or other audio visual materials more actively? What sort of response do they make on associated tests or written assignments? If Open University material is used are the students recommended to read the associated OU text too?

Two further pieces of work need to be carried out.

a) Why non-users do not use the resources and how they write their assignments, where appropriate.

b) how do students use the materials - an in-depth study is needed to improve the materials rather than their organisation and administration.

DH/SS/7/12/77

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References:

HARRIS, N.D.C. & KIRKHOPE, S. (1977a) "An Evaluation of the Use of Self-Instructional Materials in the Library" in HILLS, P.J. and LEEDHAM, J. (Ed.) Aspects of Educational Technology, XI, London, Kogan Page.

HARRIS, N.D.C. & KIRKHOPE, S. (1977b) "The Evaluation of Self-Instructional Materials in the Library", Bath, University of Bath Educational Services Unit.

1. The Library Organisation and Methods of Investigation.
2. Distribution of Study Pack, Videocartridge, Synchronised Tape Slide and Microfiche Use.
3. Student Reaction to Study Packs and Videocartridges.
4. Feedback to Lecturers and the Library.
5. Cost Analysis.

Appendix A

Questions to be covered in an interview

1. Why material used
2. How material used (only read, notes made, etc.)
3. Where materials used
4. Have materials been used before
5. Were there any related materials (worksheets, handouts, etc.)
6. How informed of presence of material (by lecturer, etc.)
7. How do materials relate to the course (background reading, etc.)
8. Was the purpose of the materials clear
9. What were the main points of the material
10. Were the contents of the material known (papers missing?)
11. Was the material difficult/easy/boring/interesting/useful/ irritating/annoying
12. Should there be more/less of the material
13. If more, what type
14. Any alterations required for next year
15. Able to handle machines - instructions sufficient?
    - Library staff helpful?
16. Any difficulties of access (queueing, etc.)
17. Microfiche copy